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ABSTRACT

Case study and documentary research techniques were used in this study to identify models of good practice in providing primary education for children with special educational needs in selected Asian countries. The report first synthesizes current trends in primary education for children with special educational needs. It identifies an international and regional shift in the definition of such children and their needs and defines seven principles for a new understanding of "inclusive" universal primary education, such as development of legal frameworks and policy, commitment to a child-centered educational philosophy, and commitment to shared responsibility within communities. Under each principle, the report identifies policy options and current practices, including ways of blending provision for children with special educational needs into regular systems. The report advances the case that without more appropriate and responsive provisions from primary schools, many children will continue not to attend or, if attending, will not succeed and will eventually drop out. The report sounds a warning note that such an education demands major changes in the way in which primary schooling is planned, implemented, and evaluated. Improvements are also called for in materials, curriculum, teaching methods, and professional training. The report concludes with a list of country contributors and consultants and a glossary. Contains approximately 175 references. (JDD)

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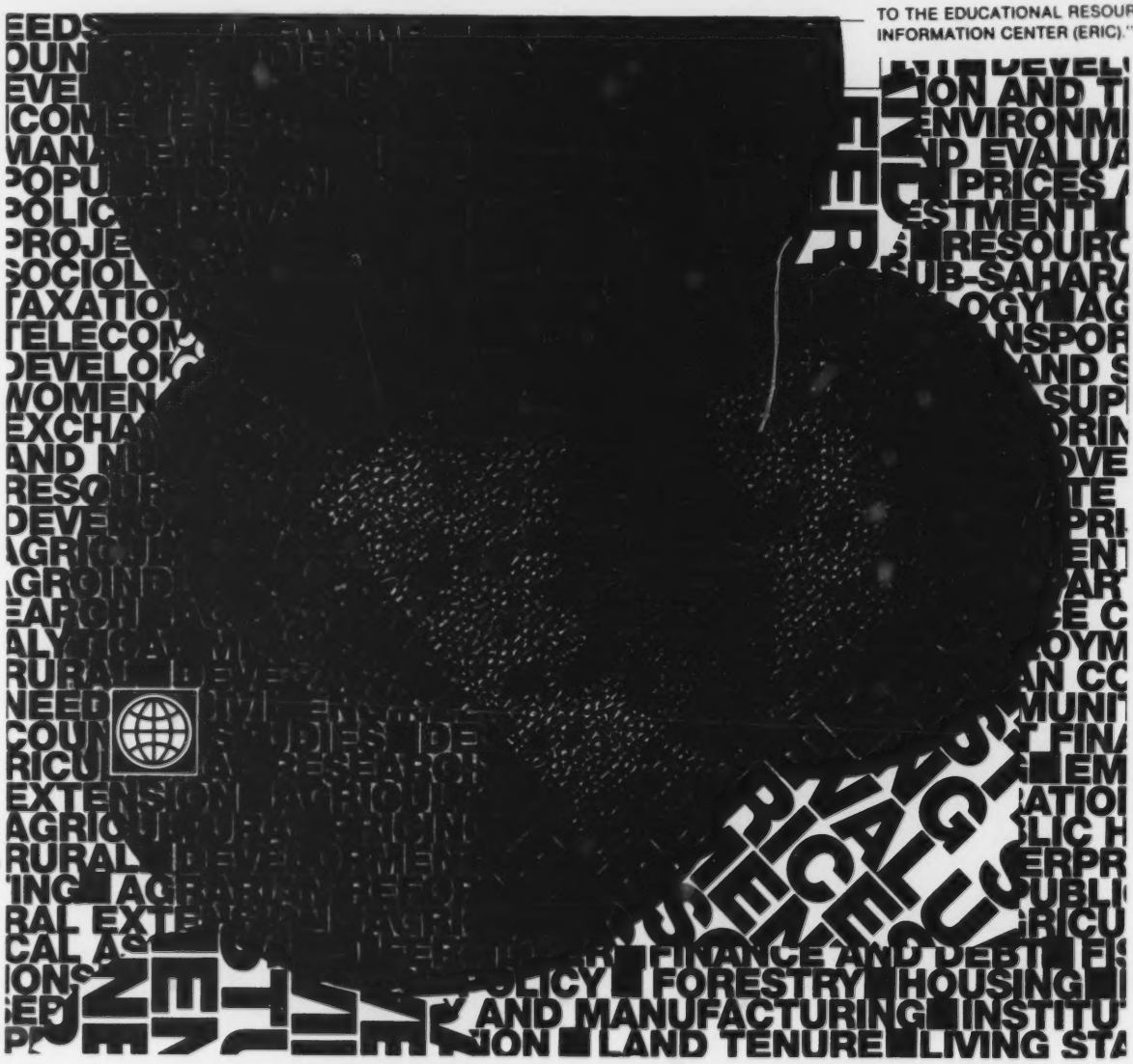

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Provision for Children with Special Educational Needs in the Asia Region

WORLD BANK TECHNICAL PAPER NUMBER 261
ASIA TECHNICAL SERIES

Provision for Children with Special Educational Needs in the Asia Region

James Lynch

The World Bank
Washington, D.C.

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TABLE OF CONTENTS

FOREWORD vii

ABSTRACT ix

ACKNOWLEDGEMENTS xi

INTRODUCTION 1

The Terminology of Special Educational Needs 2
The Demographics of Children with Special Educational Needs 5
Some Developments in Provision in the Asia Region 7
The Movement to Inclusive Universal Primary Education in the Asia Region . . . 13

THE SEVEN PRINCIPLES 16

Principle 1: The Development of Policy, Legal Frameworks and Institutional Arrangements 16
Principle 2: Commitment to a Child-Centered Philosophy of Education 34
Principle 3: Emphasis on Success and the Enhancement of Quality 42
Principle 4: Strengthening the Link between Regular and Special Systems 53
Principle 5: Commitment to a Shared Responsibility within Communities 57
Principle 6: Recognition by Professionals of a Wider Diversity 61
Principle 7: Commitment to a Holistic Approach to Educating Children 68

THE PARADIGM SHIFT IN ASIA 81

The Major Messages of the Report 83

LIST OF COUNTRY CONTRIBUTORS AND CONSULTANTS 86

GLOSSARY 87

SELECT BIBLIOGRAPHY 94

LIST OF BOXES

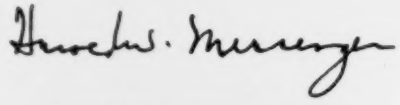
Box 1: Categories of Children with Special Educational Needs 1
Box 2: Impairment, Disability and Handicap 3
Box 3: The Evolution of Special Education in the People's Republic of China 8
Box 4: The National Center for Special Education (NCSED) in Bangladesh 9
Box 5: Some Examples of Developments in the Asia Region 15
Box 6: All Children Have the Legal Right to Primary Education 16
Box 7: Primary School and Special Educational Needs Policies 18
Box 8: The Role of Advocacy in the Legislative Process in Japan 20
Box 9: The Relationship between Policy and Integration Practice in Hong Kong 21
Box 10: Policy and Practice in Integrating SEN Pupils in Sri Lanka 24
Box 11: The Evolution of Integrative Measures in the People's Republic of China 26
Box 12: Pakistan's Policy for the Education and Rehabilitation of Disabled People 28
Box 13: SSRs and Unit Costs for Regular and SEN Pupils 32
Box 14: Education is Child-Centered: Every Child Is a Learner 36
Box 15: A Curriculum Strategy for Integration: The IEP 37
Box 16: The "Tsukyu" Resource Room System in Japan 38
Box 17: Towards an Individualized Educational Program (IEP) for All 39
Box 18: Learning from the Same Curriculum through Sign Language 40
Box 19: A Model of Curricular Adaptation for SEN Children in Indonesia 42
Box 20: Comparison of Educational Failure Paradigms 44
Box 21: Success Orientation in Curriculum, Instructional Methods and Materials 45
Box 22: The PIED Teacher Training Program in India 47
Box 23: The Improvement of Quality through Teacher Education 51
Box 24: Strengthening Links between Regular and Special Educational Systems 55
Box 25: Approaches to Closer Integration between Regular and Special Education 57
Box 26: Integration and Coordination: Support Systems for Children 58
Box 27: A Model of Community-Based Rehabilitation in Nepal 60
Box 28: Community-Based Housing for Resettled Adolescents in Korea 61
Box 29: A Multisite Action Research Project 63
Box 30: Policy and Practice in the Development of Responses to Wider Diversity 65
Box 31: Accepting Wider Diversity through Physical Accessibility to Schools 66
Box 32: Teacher Training to Promote Continuing Strengthening and Renewal 67
Box 33: A Holistic and Developmental Approach to Educating Children 72
Box 34: Home-Based Resource Teaching Services 73
Box 35: The Comprehensive Observation and Screening Scheme in Hong Kong 76
Box 36: Association among Nutritional and Health Conditions and Learning 77
Box 37: School Age Children Exhibiting Nutritional Deficiencies (%) 79

FOREWORD

The work for the report summarized in this brief paper was focussed almost exclusively on primary schools and early childhood education. Since the Jomtien Conference, the World Bank has considerably increased the value and range of its assistance in the area of basic education. A key feature of the Bank's assistance has been focussed on improving the quality and effectiveness of education, to ensure that the Jomtien objective of improved learning actually takes place. Although the Bank's central policy unit has not focussed on the issues of children with special educational needs, some work has been undertaken in the Asia region of the Bank. This issue was considered timely and appropriate in the Asia region, in view of the relatively full enrollment of school age children in many East Asia countries in particular. This fact provided the opportunity to focus on one subset of the population, which either did not have access to basic education services or did not have access to appropriate services.

The paper is intended to contribute to the dialogue on how primary education may be achieved for all children. It describes some of the policies and operational practices currently being implemented in a number of countries in the Asia region in responding to primary school children with special educational needs. The paper identifies a trend in all countries included in the study to a more inclusive primary school, where more and more children with special needs are being mainstreamed, and it describes a range of alternative institutional and pedagogical methods of integrating the vast majority of children with special educational needs into regular primary schools. It draws attention to the implications of this trend in terms of policies for materials, curriculum, teaching/learning approaches, teacher training and community involvement, as well as the relationships between previously separate systems of regular and special education.

The concluding section of the paper contains a summary of the main messages of the report and suggests that more research is needed, so that current approaches may be subject to formative evaluation to identify best practice in providing quality primary education for all children, cost effectively and in an educationally sound way.



Harold W. Messenger
Director
Asia Technical Department

ABSTRACT

Case study and documentary research techniques were used in this study to identify models of good practice in providing primary education for children with special educational needs in selected countries in the Asia region. While the 15 case studies represent an opportunity sample of the countries of the region, yet in several senses they represent a cross section, geographically, demographically, economically, culturally and educationally. The sample includes cases from both South and East Asia, the largest country in the world and one of the smallest, landlocked and maritime, religious and secular, industrialized, newly industrialized and least developed countries, those who have already achieved a very high level of primary and secondary enrollment and those who still face the daunting task of achieving universal primary education by the year 2,000.

The report defines three groups of children with special educational needs, and advances the case that without more appropriate and responsive provisions from primary schools, many children in the above three groups will continue either not to attend or, if attending, will not succeed, may repeat and will eventually drop out. These children are marginalized by a range of difficulties including the consequences of poverty and physical or mental impairment, but also by malnutrition and ill-health before or during their school lives and what the report terms "situational disadvantage". All these children require special help to enroll and progress in primary school.

The report provides a synthesis of current trends in primary education for children with special educational needs in selected countries in the Asia region. It identifies an international and regional shift in the definition of such children and their needs and defines the essential elements of the paradigm shift, including seven principles for a new understanding of "inclusive" universal primary education. Under each principle the report identifies policy options and current practices, including a range of ways of blending provision for children with special educational needs into the regular system.

The report argues that universal primary education (UPE) cannot be achieved without the inclusion of children with special educational needs, either in regular schools or in segregated settings, and that most children with special educational needs can be successfully and less expensively accommodated in integrated than in fully segregated settings. Educational benefits for all children may also be associated with the quality improvements inherent in the provision of "inclusive" primary education. But the report sounds a warning note that such an education demands major changes in the way in which primary schooling is planned, implemented and evaluated. Improvements will also be needed in materials, curriculum, teaching methods and continuous professional training of the staff involved.

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The views expressed in this paper are those of the author and should not be taken as implying a commitment, policy or opinion on the part of the World bank. The report does not necessarily reflect the views of the World Bank, and the World Bank accepts no responsibility for the views expressed in this report.

INTRODUCTION

This summary report of a much longer and more detailed account, completed in July. 1993, is based on desk studies, documentary searches and 15 case studies of primary schooling for children with special educational needs in the Asia region. The report defines children with special educational needs as all those children who permanently or temporarily during their school careers have need of special educational responses on the part of the teacher, the institution and/or the system, by dint of their physical, mental or multiple impairment or emotional condition or for reasons of situational disadvantage. The report gives examples of recent developments in policy and practice in selected countries of the Asia region, aimed at increasing and improving provision for these children. It highlights, in particular, developments towards various models for a more "inclusive" primary education, which can include the vast majority of children with special educational needs within the regular primary schools. The report is concerned with the three groups of children, identified in Box 1.

Box 1: Categories of Children with Special Educational Needs

* Children who are currently enrolled in primary school, but for various reasons do not progress adequately.
* Children who are currently not enrolling in primary school, but who could be enrolled if schools were more responsive.
* The relatively smaller group of children with severe physical, mental or multiple impairments who have complex special educational needs that are not being met.

The report considers developments of primary education for children with special educational needs in the Asia region against the background of seven major principles derived from the deliberations and declaration of the Jomtien Conference. Each of the seven principles is illustrated by material and data from fifteen countries in the Asia region as it relates to the emerging provision for these children. A range of educational interventions, designed to maximize the potential of the three groups of children with impairments and other disadvantages, is described in the text and illustrated by means of tables, and text boxes. The report identifies a movement from a more traditional, urban elite-oriented and segregated provision to a more inclusive, participatory and universal primary schooling for such children. The emphasis throughout is on ways in which the vast majority of children with various impairments and other disadvantages can be affordably and gradually included in universal primary education (UPE) and on the implications of such a development in seven major areas. The seven headings under which the report is organized are:

(i) Legal and Policy Mandates;

(ii) Child Centered Approaches to Teaching/Learning Strategies;

(iii) Emphasis on Success, Educability and the Enhancement of Quality;

(iv) Closer Cooperation between Special and Regular Education;

(v) Shared Community-Based Responsibility;

(vi) Active Recognition of Diversity in the School System and the Primary School; and

(vii) A Holistic Approach to Children and their Needs.

The Terminology of Special Educational Needs

In this report, the term "special educational needs" comprehends a range of children found within the three categories above, including those with situational disadvantages due to malnutrition, child labor and other factors associated with poverty and subsistence economies, as well as children with impairments in movement, hearing, speech and language, vision, intellectual abilities and emotional problems and any combination of impairments. The terminology used in this Report is in harmony with common usage and acceptance among educators, people with impairments and others who utilize positive, less stigmatizing terms, such as "children with impairments" as an alternative to traditional terms such as "handicapped", "retarded", or "slow learner". The World Health Organization has developed a classification system in an attempt to standardize the terms "impairment", "disability" and "handicap" and their relationship to one another. The classification distinguishes among (1) the specific organic or bodily deficit (the impairment); (2) the impact of the impairment on the child's ability to function in specific activities in relation to the child's age and culture (the disability); and (3) the disadvantage placed on the individual who has an impairment or disability (the handicap)[1].

A handicap is, thus, the result of social factors outside the person's control which interact with an impairment or a disability and make the individual less able to perform an essential social role. It is a distinctly social concept and includes factors in the environment such as social discrimination, lack of accessibility to services, inadequate educational and service responses. A focus on impairment offers a rationale for intervention, emphasizes the organic nature of a difficulty and is less pejorative than the other terms. It also provides a model oriented to strengths rather than weaknesses, which builds on the existing abilities of a

1/ World Health Organization (1980), International Classification of Impairments, Disabilities and Handicaps: A Manual of Classification Relating to the Consequences of Disease. Geneva: WHO.

child with an impairment, in order to stimulate development and compensate for the impairment through specific education and training[2].

Box 2: Impairment, Disability and Handicap

Impairment:	"A permanent or transitory psychological, physiological or anatomical loss or abnormality of structure or function".
Disability:	"Any restriction or prevention of the performance of an activity resulting from an impairment, in the manner or within the range considered normal for a human being".
Handicap:	"A disability that constitutes disadvantage for a given individual in that it limits or prevents the fulfillment of a role that is normal depending on age, sex, social and cultural factors for that individual"[3].

Group One: Children Currently Enrolled in Primary Schools

With the significant expansion of primary education in the last decade, numerous children with special learning needs have been enrolling in primary schools. While this is encouraging and laudable, without "special" educational responses, many of theses children will not survive the system. This group of children may have a variety of impairments and disadvantages that translate into special educational needs. As the pace towards universal primary education mounts, this group of children represents an increasingly large number of students who are already enrolled, but not progressing in primary schools. They are often at risk of repeating or dropping out because of poverty, hunger, malnutrition, environmental or cultural reasons and because of minor impairments that impede their performance. Often, they are at risk because the school does not perceive and respond to their needs. More than one-third of children entering the first grade in many countries in Asia fail to reach the end of the primary cycle[4]. Many educators believe that high drop-out and repetition rates reflect **learning problems** that must be resolved by the child and family. The cause of these rates may, however, equally be linked closely to **poor educational provision and low teaching and assessment standards** that can be solved only by the teachers, the school, the community and the educational system working together as a whole. In other words, these

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2/ Mittler, P. (1992), International Visions of Excellence for Children With Disabilities. Speech presented at the International Convention of the Council for Exceptional Children, Baltimore, Maryland, USA. April, 1992. pp.2-3.

3/3/ United Nations Children's Fund (1979), Childhood Disability: Its Prevention and Rehabilitation. New York: UNICEF, Document E/ICEF/L.1410, p.10.

4/ Mingat, A. & Tan, J. (1992), Education in Asia: A Comparative Study of Cost and Financing. Washington, DC: The World Bank, p.109.

phenomena may be more linked to school failure that to pupil failure, indicating a need to change the current failure syndrome of schools to one which is success-oriented.

Group Two: Children Not Currently Enrolled in Primary Schools

This group of children, including street children, orphans, or working children, could be enrolling and remaining in primary school but are not, because they have mild to moderate impairments or other disadvantages. Frequently they are girls, retained at home for cultural, social or economic reasons. Out-of school children include those who are homeless or have lost their parents or guardians and who must work to contribute to the family income. This group of children includes those with mild to moderate impairments which are currently viewed as severe enough to prevent them from being sent to school by the families or communities, or accepted in school by the teachers. All of the special conditions of in-school children who are failing can be found among these out-of-school children, the difference often being the perceived severity of their impairment or condition. In developing countries, it is estimated that there are some 130 million children between the ages of 6 and 11, who are not receiving any kind of basic or primary education, 60% of them girls[5]. These 'forgotten children' can probably be served in primary schools at a unit cost only marginally higher, if higher at all, than that of regular children, certainly within affordable limits and much less expensively than segregated provision. The reasons for their failure to enroll are varied, yet many are potentially fully able to benefit from education. Economic benefits accrue to the family, the community and the child, which becomes a social and economic asset rather than a liability.

Group Three: Children with More Severe and Multiple Impairments

This third group is much fewer in number and more difficult to serve in regular schools than the other two groups. Those few who are served, at a very high cost, in developing countries are usually the children of the urban elite. These children have moderate to severe physical, sensory and mental impairments requiring more specialized but not necessarily totally separate educational responses. They may suffer from profound hearing loss or movement difficulties, or blindness or multiple impairments. The diversity and complexity of their needs is reflected in the fact that the exact figures concerning prevalence rates are not available. The World Health Organization (WHO) estimates that present institution-based services cater for only 1% to 2% of the children in need of such facilities, although these estimates vary greatly by country and type of impairment[6,7].

5/ Estimates of the number of out of school children are between 100 and 130 million children. See United Nations Children's Fund, (1991), The State of the World's Children. New York: Oxford University Press, p.26. and in United Nations Educational, Scientific and Cultural Organization, (1991), World Educational Report. Paris: UNESCO, p.51.

6/ United Nations (1990), Disabled Persons Bulletin, No.2/1990, Vienna: UN Center for Social Development and Humanitarian Affairs, p.5.

Provision may be totally or partially in separate facilities, units or centers satellited to regular schools, in regular schools, or by some combination of such provision. Increasingly, as universal primary education progresses, children in the categories of severe hearing and vision impairments may be included in regular schools, even if it may be in special classrooms for at least part of their time in school. Many, however, are totally excluded both from school and, for lack of availability, from segregated facilities. Recent shifts in North America, Europe and some developing countries in the Asia region to more inclusive, integrated education of such children have proven modestly successful in social and educational terms.

The Demographics of Children with Special Educational Needs

The size of the population of primary age children with special educational needs in Asian nations is difficult to quantify. Some of the variables that render estimating prevalence rates difficult include the lack of standardized screening to diagnose impairments, the absence of clear standards for what constitutes a disability, the lack of properly conducted population studies, lack of knowledge on the part of governments who are reporting data of the number of children served by NGO facilities, and the fact that some impairments are reversible and disabilities can be overcome. But the perception of disability is also influenced by the local culture, and family members may be ashamed or afraid of exposing their child with an impairment due to the cultural stigma attached. Although constituting only a portion of all the children with special educational needs, as defined in this report, the world prevalence rate for impairments was estimated by WHO in 1978[8] to be around 10%. This figure was generally accepted and adopted by other U.N. agencies and international NGOs concerned with disability issues. The population affected by impairment may be gauged from the following:

(a) Based on the 10% figure, the total number of impaired people in the world was approximately 450 million in 1980, 500 million in 1990, and is expected to rise to well over 600 million by the end of this century (approximately 40% of this population may be expected to comprise school age children);

(b) UNICEF estimates that 140 million children with significant impairments are living in developing countries[9];

7/ United Nations Education, Scientific and Cultural Organization (1990), "Foreword" in S. Hegarty The Education of Children and Young People with Disabilities: Principles and Practice. Paris: UNESCO, p.i.

8/ World Health Organization (1978), Classification of Disability. Geneva: WHO, Document Pro 29, Annex 1, para. 1.

9/ United Nations Children's Fund (1991), State of the World's Children, 1991. New York: Oxford University Press.

(c) Of these 140 million children, 120 million live in developing countries 88 million in Asia, 18 million in Africa, 13 million in Latin America. Only 11 million live in Europe and 6 million in North America; and

(d) One family in 4 is estimated to be affected by impairments in one way or another.

The tragedy is that much impairment is either preventable or reversible. Each year 35 million children die and another 35 million become impaired; half of these deaths and impairments are preventable by the use of knowledge already in our possession[10]. United Nations estimates suggest that of the world's 450 million to 500 million people with impairments, there are at least 70 million in developing countries whose sight, movement or hearing could be restored at a unit cost between $15 and $40[11].

In the Asia region, estimates of the percentage of the total population with impairments (children and adults) range from 0.1% to 13%. Recent estimates of the total population of children who would fall into the category of "special educational needs", range from 5% to 7%[12], but there are prevailing and countervailing views. On the one hand, there are those who argue that the size of the population and the pattern of impairments found among children in developing countries may be expected to be very different from those in Western countries. For example, many more children become impaired as a result of infections such as meningitis and encephalitis, as well as from severe and persistent malnutrition, iodine deficiency, head injuries and as a direct result of armed conflict and civil disturbances[13]. Moreover, sensory impairments are much more common than other types of impairment. On the other hand, surveys which were conducted by the UNESCO Sub-Regional Project for Special Education in Eastern and Southern Africa suggested that 5% was a more accurate estimate for that region[14]. The scaling down of estimated prevalence rates appears to reflect the high infant and under-five mortality rates in many developing nations. In nations where childhood mortality rate is over 100 per 10,000, the consequence of disease and malnutrition may often be death rather than a life-long impairment.

10/ Mittler, P. (1992), International Visions of Excellence for Children With Disabilities. Speech presented at the International Convention of the Council for Exceptional Children, Baltimore, MD, USA. April 1992, pp.2-3.

11/ United Nations Development Program/IMPACT (1991), Disability Prevention: A Priority for the 90's. Vienna: United Nations International Centre.

12/ Helander, E. (1989), "Global Dimensions of Disability". Geneva: WHO, unpublished manuscript.

13/ Mittler, P. (1992), "International Visions of Excellence for Children With Disabilities". Speech presented at the International Convention of the Council for Exceptional Children, Baltimore, MD, USA. April 1992.

14/ Ross, D. (1988), Education Handicapped Young People in Eastern and Southern Africa. Paris: UNESCO.

Differing standards for estimating prevalence rates seem to be applied to developed and developing countries. In many western nations, prevalence rates of school children with special educational needs in all three groups covered by this report are estimated to be in the range 10% to 20%[15], and some estimates in the United States of such children who need special educational services can range from 11% to 90% in some poor urban cities. While most prevalence surveys integrated into national censuses or conducted independently result in underestimations for reasons given above, the range of prevalence rates typically and normally given for children with impairments is between 1% and 5%[16]. Rough estimates of the much larger number of primary school age population potentially in need of special educational responses, however, can be made by extrapolating from three indicators in the poorest countries in the Asia region: (a) prevalence figures for impairments among in-school primary age children (around 5%); (b) system efficiency and survival rates or put another way school failure figures (sometimes over 60%); and (c) estimates of the small minority of children who are entered into segregated settings (1% to 2%). Based on these figures a rough estimate of the size of the total school-age population in need of specialized educational responses may be as high as 50% of children in many of the least developed regions of countries in Asia.

Some Developments in Provision in the Asia Region

Provision for children with special educational needs has improved remarkably over the past few years and plans indicate a continuation of this trend. Nonetheless, it is patchy across the nations included in this study, but usually insufficient, if not in number, then in quality. Non-governmental organizations (NGOs) or private voluntary organizations (PVOs) have sometimes been more influential than government agencies in initiating special needs education development. The initiators of specialized services in nearly all countries in Asia have been religious, mostly Christian, missionaries during the late 1800s and early 1900s. Box 3 illustrates the history of special needs education development in China[17].

As is reported among nearly all case study authors, Private Voluntary Organizations (PVOs) at the local, regional and international levels have significantly influenced the development of special needs education in each of the 15 countries included in this report. In many cases, PVOs appear to be in the vanguard in initiating services, in promoting increased government involvement, and in continually monitoring development towards the improvement and expansion of educational interventions. The effects of PVO influence in

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15/ Hegarty, S. (1992), The Education of Children and Young People with Disabilities: Principles and Practice. Paris: UNESCO.

16/ United Nations Statistics Office (1990), Disability Statistics Compendium. New York: UN Department of International Economic and Social Affairs, Statistical Office.

17/ Ogamo, H. (1978), "The Impact of the Japanese Culture on Special Educational Programming". In A. Fink (Ed.) International Perspectives on the Future of Special Education. Reston: Council for Exceptional Children (CEC), p.65.

the area of special needs education were measured through a case study in Mauritius. In an analysis of 480 catalytic and implementing events associated with the creation and expansion of special needs education between the years 1976 and 1991, PVOs were intricately involved in 62%. International PVOs' assistance was found to be as powerful as local PVOs in catalyzing and more influential in funding special needs education development. The analytical study in Mauritius discerned that international agencies were involved in 44% of all special education events, which was somewhat more than the total of government involvement in 38% of the events[18].

Box 3: The Evolution of Special Education in the People's Republic of China

In 1874, a British priest opened the first special needs education facility: a school for blind children in Beijing. In 1887, an American priest opened in what is now Shandong province, the first school for deaf children. Foreign braille and fingerspelling for blind and deaf children respectively were introduced in two additional schools for blind and deaf children that were opened soon after. These alternative communication systems were the bases for the development of Chinese braille and a hand alphabet. In later years, other religious and charitable organizations opened special schools. Added to these were private schools opened by Chinese communities and ruling authorities throughout the country such as the Nanjing Municipal Blind and Deaf School.

When the new China was founded in 1949, there were 40 special schools for around 2,000 blind and deaf pupils. The newly formed government took over the special schools and removed their charitable and relief characteristics. It incorporated special education as an integral component in the entire educational system. By 1953, there were 64 schools for sensorially impaired children accommodating 5,260 pupils. The government developed specialist teacher training programs, specialized curricula and unified the country's new braille and sign language systems based on the phonetic alphabet. By 1978, 31,000 students were enrolled in 292 schools.

In 1978, the government of China declared education one of the strategic priorities and defined clear standards for specia L education. From 1984, children with learning difficulties were provided an education. As of 1991, there were 24 schools for blind students, 550 schools for deaf students and 235 for mentally retarded students with a total special needs education enrollment of 85,008 with 16,000 teachers, in addition to children with mild impairments who were attending regular schools. The government admits it has far to go in providing an education to the full estimated 6 million children with special educational needs. With the compulsory education legislation for children with SEN passed in 1990 and pressure placed on regional governments for increased funding to special needs education, there is great promise for rapid development in the area of special needs education in China.

Provision for all three groups of children is as yet meager and particularly so for children with impairments. Yet, provision for all three groups is developing rapidly, if modestly. In Bangladesh, the Government, through the Ministry of Welfare provides

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18/ Brouillette, R. (1992), "The Development of Special Education: A Case Study in Mauritius". Ann Arbor: University Microfilms International, pp.313-314.

services for 2,200 handicapped children in government schools and through grants to private, special schools. The government maintains five primary schools for students who are visually impaired, seven primary schools for students who are hearing impaired, two employment rehabilitation centers for physically handicapped adolescents and one industrial rehabilitation unit for visually impaired adolescents. Currently there is no government school for mentally retarded children except for the demonstration classes at the National Center for Special Education (NCSED) which was opened in Dhaka in 1992.

Box 4: The National Center for Special Education (NCSED) in Bangladesh

The NCSED was built and equipped through funding from Norwegian private voluntary organizations for and of people with impairments and with greater than matching funds (80:20) from Norwegian Aid (NORAD). It has a capacity of 229 places for primary age children (4-16), with 130 places in hostel rooms. The complex has demonstration schools for students who are visually impaired, hearing impaired, and mentally retarded including pre-school, parent and pre-vocational training. NCSED is the first teacher training college for special education in Bangladesh. When fully operational, the facility will train 30 teachers per year, and will include a materials production center for teaching aids for the children as well as a braille press. Elsewhere in Bangladesh, national and international voluntary organizations run about 117 facilities, schools and rehabilitation services for the impaired children and adults. Most government supported facilities are schools up to the secondary education level and include hostel facilities to accommodate those who cannot reach the school in a day's journey (usually by river barge). Experience has led service providers to believe that, where there are no hostels, the capacity of the schools is not fully utilized. Voluntary organizations have also provided ancillary services for all age groups including treatment facilities, awareness programs, assessment and tests, guidance to parents, education and training as well as vocational facilities.

In China, a UNICEF estimates that less than 2% of the disabled have access to some form of service. In cities the percentage could be higher while in rural settings services are nearly non-existent. From 1980 to the end of 1988, major progress was made in implementing the China Five Year Work Program for Disabled Persons. In 1980, 292 schools for handicapped children with an enrolment of 33,000 children and 4,800 teachers offered education and mostly custodial care to either blind or deaf children, with the largest number of schools for the deaf. Between 1984 and 1987, schools for children with learning difficulties have increased from 4 to 90. By 1988 the number of special schools increased to 650 serving 63,097 children instructed by 11,917 teachers. By 1990, the Ministry of Civil Affairs reported that there were 800 social welfare institutions providing care to a larger number of children on a permanent basis, and that additionally 20,000 children with impairments were provided with services in community day-care centers. In addition, the number of special schools increased to 820. Special classes, mainly for slow learners, affiliated to regular schools enrolled 2,651 children[19]. In 1993, the province of Nanjing,

19/ China Daily, 11 October 1988, quoted in United Nations Children's Fund (1989), Children and Women of China, a UNICEF Situation Analysis. Beijing: UNICEF, p.118.

assisted by Save the Children Fund with a British special educator serving as a resource person, began experimental in-service teacher training to provide in-school remedial education to children with mild learning difficulties.

The total number of blind, deaf and intellectually impaired children at school has reached nearly 130,000, a modest beginning to serving the estimated 8 million children with impairments. Conservative estimates by the State Education Commission indicate that only 5.5% of the deaf, 2.7% of the blind and 3 out of every 1000 children with learning difficulties can be placed in schools"[20]. Of those fortunate few who were enrolled in these schools in 1987, the majority (62%) are boys. Only 2% of them are from minority groups and 72% of the teachers are women. Most of the schools and rehabilitation services are in urban areas while the large need in rural areas is currently not yet met. One of the main problems in China is lack of teacher training facilities for special education, but here too, the achievements are marked. By 1988, fifteen provinces reported that they had training facilities for teachers in special education. UNICEF estimates that there is a need to train 6,000 new teachers every year for the next 12 years (1988-2000) in order to fully satisfy the need for specialist teachers in China.

Services for impaired children in India are similarly meager. Special classrooms and schools emerge mostly in urban areas, and even then they reach less than 4% of those with physical impairments and less than 0.2% of the children with learning difficulties. There are nearly 937 institutions and agencies, 80% are run by voluntary organizations and the remainder by state governments or by the government, offering educational and training services for about 90,000 children with impairments. This coverage is not adequate for the estimated 3 million children in need of special education. Since the mid-eighties, the National Council of Educational Research and Training (NCERT), with assistance from the Ministry of Human Resources and UNICEF, has launched Project Integrated Education for Disabled (PIED) in several states. The program has stimulated community and government actions that are setting trends towards a new equalization of educational opportunities[21]. In rural areas of India, the Ministry of Welfare has initiated a model District Rehabilitation Center to provide services of prevention, early identification, education and rehabilitation. The project has increased the enrollment of children with impairments in regular schools and has improved their retention rates through curriculum adjustments and the adaptation of instructional methods and materials to fit individual needs. The Government has established four national institutes, one in each area of impairment, with the objective of providing national level facilities in research, training, consultancy, information and documentation. These institutes have also set up training centers for in-service special education teachers and other professionals.

20/ Jangira, N. K. (1992), "Special Education for the Nineties", New Delhi: The Sunday Times of India. (March 15).

21/ United Nations Children's Fund (1991), Children and Women in India: A Situation Analysis. New Delhi: UNICEF, p.61.

It is the community which has assumed the administrative role in special needs education in Indonesia, and nearly 90% of the management of special needs education is carried out by the private sector. Through Presidential Instruction No 4 of 1982, 200 schools for children with impairments are to be built where such schools are not already found[22]. These special facilities range from the special schools (Sekolah Luar Biasa or SLB), which are typically segregated schools in which children are placed by category of impairment, special elementary schools (Sekolah Dasar Luar Biasa or SDLB) in which children with different impairments are educated together; and integrated schools (Sekolah Dasar Terpadu or SD Terapado) which are elementary school, providing mainly an integrated program for visually and hearing impaired children, who can keep pace with the mainstream curriculum. The reported number of children in special schools exceeds 36,000.

The special needs education sector in Malaysia has developed markedly in the last decade, spurred by the proclamation of the 1981 United Nations Year of Disabled Persons. Actions during the early 1980s included closer coordination among the various, mostly private, service agencies and the concerned government agencies including the Ministry of Education, the Ministry of Welfare Services and the Ministry of Health. Prior to 1988, the Ministry of Education focussed primarily on the education of hearing and visually impaired children, although from 1982 the Ministry through the Teacher Training Division's remedial education department included dyslexia as part of the integrated primary school curriculum. By 1990 the needs of the other categories of impairment including learning difficulties had been addressed in some fashion. As part of the government's thrust for educational renewal, there is currently a program for upgrading and renovation of integrated classes and special schools as well as enhanced initial and in-service teacher training. As an incentive, an allocation is provided to schools for each self-contained classroom opened for children with learning difficulties. Malaysia was among the first Asian nations to establish an association for children with specific learning difficulties such as dyslexia: a project which was encouraged by the private International School of Kuala Lumpur where there is a learning disabilities, consulting resource teacher.

Special education in Nepal was initiated in 1964 at a laboratory school of the College, now Faculty, of Education of the University. The proportion of impaired children in Nepal is reported to be around 3%, and the provision for education and training for Nepalese children with impairments is minuscule in relation to the need. Since its founding in 1984, Nepal's Welfare Society for the Deaf has established only 3 schools and units for hearing impaired children, in addition to the Kathmandu school for the deaf founded in 1967. By 1992, deaf education was offered to 361 students throughout the country. The Nepal Disabled Association (NDA) (in existence since 1967) manages the Khagenda New Life Center in Kathmandu which provides services to 373 students who have various physical and multiple impairments. Among those served by Khagenda, 102 are residents in the Center. The Nepal Association for the Welfare of the Blind, founded in 1985, manages 21 schools or

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22/ APEID (1984), Towards Universalization of Primary Education in Asia and the Pacific Country Studies Indonesia. Bangkok: UNESCO regional office.

units which educate 217 blind students. All but one of these schools are attached to regular schools. The Association for the Welfare of the Mentally Retarded founded in 1981 provides education to 407 pupils with learning difficulties in 16 units throughout the country. In 1971, the Ministry of Education and Culture assumed responsibility for special needs education through a Special Education Council (SEC) within the Ministry. The plan of SEC was to extend special education beyond the hills of Kathmandu with assistance from international sources. The needed international assistance was proffered, but in 1977 the coordination role was transferred to the Social Services National Co-ordination Council (SSNCC), Health Services Committee, headed by the Queen of Nepal. In 1988 no fewer than 32 international agencies were assisting in the development of services[23]. Among them were Helen Keller International, the German Blindenmission, Norwegian, British and American Save the Children, Action Aid, Seva, United Missions to Nepal, Norwegian Association for the Mentally Retarded, Mary Knoll Fathers, the World Union of the Blind, Perkins School for the Blind, Special Olympics, Sight Savers, and Jaycees among others. The combined revenues were significant. Following the decline in power of the SSNCC in 1993, the Ministry of Education and Culture resumed responsibility for special needs education through the interagency Council of Special Education and DANIDA began to make a significant contribution to the field.

There are 158 special education Centers in Pakistan, 46 managed by the Federal Government, 62 by Provincial Government and 50 by registered PVOs. Facilities in these special education centers are reported to be better than adequate. A new center for visually impaired children was recently constructed, with a capacity of 200 children of which 50 are boarders. There is also a National Talking Book Center, a Computerized Braille Press and a National Training Center for the Disabled. A National Institute for the Handicapped has been set up to co-ordinate national efforts for prevention of the causes of impairments and a National Institute of Special Education to meet the needs for trained manpower. Despite very impressive progress only about 1% of those children with impairments, and mostly boys from urban rich families, benefit from existing special education programs. The attitude towards the population with impairments remains negative and tainted by cultural superstition. Services are largely segregated. Co-operation and co-ordination between the Ministry of Education, the Ministry of Special Education and PVO service providers is problematic. As elsewhere, co-operation is upstaged by competition for scarce resources in an effort to 'colonize' children with impairments in charitable ways. Despite poor co-ordination and insufficient resources, there are several exemplary practices in attempts to educate all children and a favorable political will illustrated by the creation of a Ministry for Special Education.

In the Philippines, 85% of services and provision are provided by a wide range of government regular and special schools and through classes in state run institutions. Around 13% of specialized services are provided by private voluntary groups. The range of

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23/ Brouillette, R and Ham, M. (1988), A Directory of Disability Services within the Health Services Coordination Committee. Kathmandu: SSNCC and NFPU.

education provision includes full integration in regular classes for blind and deaf children, through which the child is enrolled in a regular class and periodically attends a supporting resource classroom for special instructions according to his needs. The Philippines has demonstrated some innovative approaches to integration. Again in Thailand, a variety of provisions exist; many in the experimental stages. There are two government schools for children with learning difficulties. One is a residential school located within the compound of the hospital for children with learning difficulties in Bangkok; the other school is a day school in Bangue District. Private schools are run by voluntary organizations that are self-financed through tuition fees paid by parents. Various preschool and primary school programs exist for hearing impaired, visually impaired and physically impaired children throughout Thailand. A recently initiated inter-agency committee of special needs education providers has been promoted by the Ministry of Education with Save the Children and World Bank Small Grants Fund assistance.

A situation analysis conducted by Unicef in 1987, estimated that approximately 12% of all primary school children in Sri Lanka suffer from impairments and other handicapping conditions[24]. The government was an early pioneer of mainstreaming and has a policy for the integration of children with special educational needs into regular primary schools (See Box 10).

The Movement to Inclusive Universal Primary Education in the Asia Region

As primary education coverage has increased, many Asian countries are increasingly facing efficiency problems in the primary education sector which are expressed in high rates of repetition and drop-out and reduced quality of learning in primary schools. Schools, it seems, are still not ready for the children who now come to school, and nutrition and health and their effect on children's learning ability are a major but little appreciated cause of inefficiency in the provision of primary education. Nonetheless, the focus is beginning to shift to the fundamental component of the education/learning process, the whole child and its ability to learn and actively participate in its own learning. In order to encourage improved learning, attention is moving to the differential readiness for learning, with which children arrive at school and to what one might describe as the "learning biography" of the learner. Many countries have introduced remedial measures into their newly developed curriculum, implying that there are children who are not learning as expected and that they need specific, additional interventions. At the same time, the concept of remediation needs further refining for it to be operationally meaningful and instrumentally effective. Automatic promotion has become, in some countries, the adopted policy for repetition and drop-out prevention, but how to assure progress and learning and not only "automatic" promotion is still unclear at least to many educators. Box 5 exemplifies some more recent developments in the Asia region.

24/ UNICEF (1987), Situational Analysis of Women and Children in Sri Lanka. Colombo.

Many countries in the Asia region regardless of whether they have yet achieved UPE or not, have by now progressed beyond the level of solely increasing access to education. Realizing that the goal of UPE will require enhancing the participation of groups which have so far remained marginal in the educational effort, most countries in the Asia region are already beginning to address the qualitative aspect of primary schooling, making provision for various special population groups and their specific needs. Even where there is still a need to improve access, countries are also planning and/or are implementing, in parallel or interactively, programs for improving the quality of schooling. As opposed to a segregated approach, serving only the needs of a small number of the urban elite, integrated programs are now reaching out in many countries to children in remote areas and girls, working and street children. There is also a growing interest in preschool education or induction programs to improve readiness for school learning, and some countries have instituted programs of preparation of young children for primary schooling, emphasizing involvement of parents and the community in the education of their children.

Asia Region countries are also investing more in improving the quality of primary education through strategies to improve teaching, through the timely delivery of appropriate materials, including readers, supplementary reading material, teachers guides and visual materials. But, although many countries in Asia are commencing the revision of their curriculum to make it more child-centered, the operational aspects of this approach are not always clear, especially at the classroom level. For example, in many countries, there is a single system, book or scheme for teaching reading. Pre-reading and supplementary reading books for children beginning to read are either unavailable, in short supply, or are not integrated with the reading scheme, thus making it more difficult for those children who have never been exposed to books and reading to acquire the skill and the habit of reading. Among measures being adopted in quality improvement, are to be found such approaches as continuous learning evaluation, remedial measures, group work, child-centered education, active learning methods and the development of decentralized and locality specific curricula, or portions of the curriculum, that will be more relevant to the children and their immediate socio-cultural context. Programs and schedules are being adopted that can be more flexible and more responsive to local conditions and specific children's needs. Some constitutions promise the early stages of primary schooling in the mother tongue. Non-formal programs for girls, for the very poor and for working children are also increasing.

The initial and recurrent in-service training of teachers and headteachers is also gradually being subject to greater and more creative scrutiny, and is being systematically upgraded. Much of the useless theory, often deriving from models current in western teacher education in the 1960s and 70s, is being discarded in favor of action methods and closer links with schools and communities, as well as curriculum-led training. More emphasis is being placed on practice, on the skills of group work, multigrade teaching, continuous pupil assessment and ways to motivate a diversity of children to learn, through he use of varied reinforcement approaches, teaching methods, strategies and activities.

Box 5: Some Examples of Developments in the Asia Region

* Although one of the poorest countries in the world, **Nepal's** 1991 National Program of Action for Children and Development included a goal to integrate children with mild to moderate impairments in mainstream primary schools. The target is to make special education an integral part of basic and primary education. The overall goal is to provide basic and primary education to 100% of impaired children by the year 2000 (about 170,000 children). The main priority will be mainstreaming mild/moderate cases. Special programs will only be for those children with severe impairments[25].

* **Pakistan** in 1985 established a Ministry of Special Education with special budget and programs, which has since opened, at a cost of around $1 million, a new center for visually impaired children. Budgetary provision have been made (for 1992) for building 32 additional special education centers.

* The **Indian** 8th Five Year Plan 1991-1996 increased the budget for children with impairments by more than five times. It supports a major national development program on the integration of such children into regular schools. The district primary education programme (DPEP) covering over 40 districts aims to make primary schools responsive to all children including SEN pupils.

* In the **Philippines,** in 1968, a Republic Act established a ten year training program for teachers of special and exceptional children. And a Congressional Commission on Education[26] states: "The gifted or talented, the disabled and impaired, and members of other cultural communities require modifications of the curricula, special services and physical facilities."

* The Plan of Action for the Children of **Sri Lanka** (1991), includes action plans for "early detection of defects and disabilities", and training of teachers to increase special education for children with impairments. The goal is to increase coverage from 1% to 10%. 37 Million Rupees ($800,000) are allocated for training of 3000 teachers and setting up 25 district centers by 1995. Actions suggested also include improvement of institutional care, provision of community based rehabilitation services and diagnosis of handicaps and, integration of the slightly handicapped into the school system[27].

* In **China** the number of special schools for students with impairments increased from 292 in 1980 to 650 in 1988. Classes for slow learners have opened in many regular primary schools, though no data are available on the number and distribution[28]. From 1988, Anhui Provincial Education Commission, with the United Kingdom Save the Children Fund, commenced the provision of integrated rural kindergarten facilities to include both impaired and regular preschool children.

* In **Japan**, the Ministry of Education has launched on a pilot basis a new type of pull-out resource room instruction, called "tsukyu" for pupils with learning difficulties.

25/ Nepal, HMG, National Planning Commission (1991), National Program of Action for Children & Development for the 1990s. Kathmandu: National Planning Commission, pp.70-76.

26/ 1991, Congressional Commission on Education, Making Education Work (An Agenda for Reform) Manila: Congress of the Republic of the Philippines, p.11.

27/ Sri Lanka National Planning Department (1991), A Plan of Action for the Children of Sri Lanka. Colombo: Ministry of Policy Planning & Implementation.

28/ UNICEF (1989), Children and Women in China, A Situation Analysis. Beijing: UNICEF, pp.117-18.

THE SEVEN PRINCIPLES

Progress towards Universal Primary Education (UPE) means that primary schools increasingly have to accommodate a greater number of children from families which have never experienced primary school, and often have very different socioeconomic and cultural backgrounds and a broader range of learning styles, behavior, capabilities and potential in all sensory domains from most pupils already in primary school. Changes in attitudes, legislation, operations, financial management, materials, teaching learning approaches, organization and professional training are evolving in Asia to try to ensure quality primary education for all. In succeeding sections of this report, such developments in the Asia region are considered against the background of the seven principles, introduced at the beginning of the report.

Principle 1: The Development of Policy, Legal Frameworks and Institutional Arrangements

This section discusses the polices, legal mandates and administrative and organizational arrangements for delivering special education services in the selected Asian nations. With the advance towards UPE, primary schools increasingly have to respond to a wider diversity of children from differing socioeconomic and cultural backgrounds with a broad range of patterns of behavior, capabilities and potential. Changes in legislation, regulations and organization, as well as operations and professional training, are occurring to ensure that primary education responds to this widening diversity and provides to all children, able as well as less able, poor as well as rich, girls as well as boys, and working as well as not working. Box 6 summarizes the shift in philosophy from the more traditional and exclusive frame of thinking to a new legislative framework of inclusion which accepts that all children have an equitable right to primary education.

Box 6: All Children Have the Legal Right to Primary Education

Traditional Pattern	Inclusive Pattern
* Special education for some members of urban elite	* Education for all, including the poor and those in remote and rural areas
* Exclusive teaching and learning	* Inclusive teaching and learning
* Two types of children: normal and abnormal	* Recognition of a continuum of children with differing needs and abilities
* All "normal" children are the same	* Differences are the norm
* Learning in segregated settings	* Learning in integrated settings
* Educational opportunities limited by exclusion from the regular education system	* Access to the same range of educational opportunities as children without special needs

The promotive activities of the United Nations Year of Disabled Persons in 1981 and the follow-up Decade of Disabled Persons 1983 -1992, while difficult to quantify, appear to have effectively influenced policies regarding the education of children with special educational needs in Asia. One measurable outcome of the global impact of international promotion is the newly declared Asia Pacific Decade of Disabled Persons (1993-2002) which all nations in the Asia Pacific region have endorsed. The Asian countries included in this study have gradually started to respond to the demands of including children with impairments and other disadvantages into their educational systems. The responses are variable and they represent a range of approaches. Some are broaching the issue as part of their strategy for UPE; some are not, but the overall trend is clear.

Legislation and other forms of policy statement are one of the most important keys to securing resources for and legitimizing special needs education. The favored strategy is to mandate educational provisions exclusively for children with special educational needs within ordinary education policy documents; the alternative to prepare separate mandatory legislation or other policy statements that entitle special needs education. Following the first of these alternatives, it appears that children in the Asia region with visual impairments continue to be integrated in proportionately higher numbers than those children with hearing impairments or those with severe learning difficulties. Nonetheless, there are examples of regulating successful integration of all categories of impairments that are discussed under Principle 4. One area where the second alternative appears to be predominantly favored is with children with physical disabilities, who though they typically may possess no cognitive deficits are seen as especially difficult to adequately integrate to any large extent in ordinary schools.

All of the 15 Asian case study nations have formulated legal frames for providing education for all children. Compulsory education was enacted around the time of independence from British rule for nations such as Sri Lanka, 1945 and India and Bangladesh, 1947; and following the second world war for Japan, 1947 and Korea, 1949. Education in Brunei Darussalam is free but not compulsory. It appears that educating children with special education needs has been an afterthought for policy makers in all the Asian nations except China and the Philippines as evidenced by the fact that none of these nations specifically mentions or includes children with special educational needs within the initial compulsory education mandates. Nine countries: China, Hong Kong, India, Japan, Korea, Malaysia, Pakistan, Sri Lanka and Thailand however, have developed separate policy documents. Nearly half of these have been implemented during the Decade of Disabled Persons (1983 - 1992). Policy in Malaysia which was written in 1981 was a direct outcome of the International Year of Disabled Persons commemorated in the same year. Seven countries Hong Kong, India, Japan, Korea, Pakistan, Philippines, Indonesia and Singapore have, in addition, other types of policy statements pertaining to the education of children with special educational needs. The rights and responsibilities of children and their parents

in the Philippines, for example, are set out in the Presidential Decree of 1974. This decree established the Council for the Welfare of Children to safeguard the rights of the child[29].

Box 7: Primary School and Special Educational Needs Policies

COUNTRY	RIGHT TO EDUCATION POLICY	SEN CHILDREN INCLUDED IN COLUMN 1	SEPARATE POLICY for SEN CHILDREN	OTHER SEN POLICY STATEMENTS
Bangladesh	YES	NO	NO	NO
Brunei	YES	NO	NO	NO
China	1982	YES	1986/1990	NO
Hong Kong	1965/1978[30]	NO	1977	1992
India	1947	NO	1986	1992
Indonesia	YES	NO	1983	YES
Japan	1947	NO	1948/1956	1973
Korea	1949	NO	1949	1984
Malaysia	YES	NO	1981	NO
Nepal	1971	NO	NO	NO
Pakistan	1988	NO	YES	1988
Philippines	1987	YES	1990	1975
Singapore	YES	NO	NO	YES
Sri Lanka	1945	NO	YES	NO
Thailand	1980	NO	1987	NO

In organization and administration, the countries also show a great diversity. At the national level, responsibility for children with special educational needs is often still shared among several ministries and agencies. Sometimes this responsibility is fulfilled by an Interministerial Committee, delegated for implementation purposes to the Ministry of Education (for educable children) and the Ministry of Social Welfare (in the case of those who are profoundly impaired). Sometimes there is a Division of Special Education within a Ministry, although this arrangement is no guarantee of integration, because the Division feels the need to preserve its power base. Thus, no one form of organization or administration is

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29/ Presidential Decree No. 603, (1974), "Child and Youth Welfare Code", December, 10, 1974. Manila.

30/ * For Primary and Junior Secondary Schools; ** 1992 Hong Kong Green Paper on Integration.

best in all circumstances to facilitate the introduction of the inclusive school, requiring new, or at least different, relationships and the development of common understandings.

In Bangladesh, the government office in charge of the disabled is the Ministry of Social Welfare, but services provided are very limited, and the predominance of services available to children with impairments is handled by national and international NGOs. There is no national policy regarding the education of children with impairments. Children considered in need of special education, by the ministry of social welfare, are those who are blind, deaf and mute, have learning difficulties and those with physical impairments. Cooperation with the Ministry of Education is in two areas: (i) with NCTB in curriculum development; and (ii) in integration of visually impaired children in secondary schools. Succeeding Secretaries of Social Welfare have shown interest in the development of programs for children with impairments, including the construction of the facilities for a National Center for Special Education (NCSED), hiring a consultant (financed by NORAD) as well as local people to develop (in the future) a national plan of action for special education. The Government agreed to undertake the full cost of the NCSED complex and its operation in the future. During the Decade of Disabled Persons, the Government devoted extra funds to the rehabilitation of children and adults with disabilities. There is a government declaration concerning its responsibilities for rehabilitation and educational services for impaired children whereby children with impairments will have the right to seven years of free education (two additional years regarded as primary education).

Until 10 years ago, China had no policy of special education per se. Individuals with impairments were generally called "cripples and useless", but in the last 10 years the progress and change has been remarkable. The Ministry of Civil Affairs (mostly concerned with rehabilitation), the State Education Commission (with responsibility for special education) and the Ministry of Public Health (with responsibility for prevention and early identification) are the main government agencies who with family, community, NGOs and the assistance of international organizations are providing and developing services. In 1985, the State council approved a national survey of disabled people. In 1988, the China Fund for the Handicapped, China Association of the Deaf and Blind and the Secretariat Chinese Organization Committee of the UN Decade of the Disabled Persons were merged to form China Disabled Persons' Federation to become a unified national organization of disabled persons of all categories. In 1988 the State Council adopted China's Five-year Work Program for the Disabled (1988-1992) as well as the National Program of Special Education. In 1990 the law on Protection of Disabled persons was approved by the standing Committee of the People's Congress. Thus, most of China's mandated programs for disabled individuals are less than 10 years old. The remarkable progress and development is due to powerful organizations, as well as international support.

Box 8: The Role of Advocacy in the Legislative Process in Japan

Japan has a long tradition of providing education to all children including those with SEN. Four-year compulsory education was launched in 1886 and increased to six years in 1907. Special education, though not legislated, began very early with the opening of the Kyoto School for the Blind and Deaf in 1878. A special class for students with learning difficulties began in 1889 in Nagano Prefecture.

Following the second world war, educational experts were requested by the allied occupying forces to evaluate Japanese education in order to establish a democratic system. Among the experts' recommendations were: 1) to provide 9 year compulsory education, and 2) to provide increased attention, at appropriate levels, to the various categories of children with SEN. The Fundamental Law of Education enacted in 1947 complied with the first recommendation. In response to the second recommendation, the Special Measures Law for General Provision of Public Schools for the Handicapped was enacted in 1956. The enforcement of compulsory education for children with learning difficulties and other non-sensory impaired children was delayed due to the social and physical reconstruction of the Japanese society.

A story illustrating the influence of public pressure (Ogamo, 1978) suggests that in mid 1950s a mother who had a severely disabled son was refused services. In desperation she killed her son and attempted suicide. She survived and was tried for the death of her son. At the mother's trial a parents' disability support group persuaded the court that Japanese society, not the mother, was guilty for not providing services. The mother was acquitted. The response to public opinion was the enactment of the 1956 Special Measures Law. Ogamo (p. 65) suggested that citizen advocacy groups in Japan have served as "...the yeast in community consciousness raising to exert strong pressure on political parties and government agencies."

In November 1973, the School Education Law provided for the establishment of schools for SEN children. A 1979 Order mandated a 9 year compulsory system of education for children with impairments. The types and degrees of impairment and recommendations for placements are defined in a 1978 Article of the amended School Education Law. But, while this Article specified compulsory placements in special classes in ordinary schools, except for children with severe impairments who are sent to special schools, the Law does not acknowledge a child's individual educational needs, only its categorical needs. Most categorical children do, however, receive individualized instruction for "educational therapeutic activities".

The Decade of Disabled Persons marked a major change, progress and expansion of education, training and rehabilitation facilities in India for individuals with impairments. The Ministry of Human Resources Development formulated the National Policy on Education (1986). This policy placed special emphasis on the removal of disparities and on the equalization of educational opportunities for the population with impairments. The government launched a centrally sponsored scheme of integrated education for children with special educational needs in 1974 which was transferred to the Department of Education in 1982. The policy objectives state that wherever feasible, the education of children with motor impairments and other mild impairments will be common with that of other children. Only those children whose needs cannot be met in common schools are enrolled in special schools. Once the children acquire communication skills and study skills, they are integrated in the common schools. A Program of Action was formulated in 1986 to implement the National Policy on Education and a Project for Integrated Education for Disabled (PIED) was designed in collaboration with UNICEF. The revised program of action (1992) stipulates

that all nationally and internationally funded schemes and programs (non-formal education, Operation Blackboard, teacher training, vocational education, etc.) will eventually have a component on special educational needs.

Box 9: The Relationship between Policy and Integration Practice in Hong Kong

Quality issues in Hong Kong primary education have been ascribed increasing importance in the 1980's following a concerted education expansion phase in the 1960's and 70's. A 1981 White Paper on Primary Education and Pre-Primary services recommended, among other things, the retraining of teachers, the promotion of the 'activity approach' to learning and a more favorable teacher pupil ratio. The following year, a panel of OECD experts in primary education examined the relationship between related sectors, the levels of education and the role of the teachers in the Hong Kong system of services for children including those with SEN who were then educated in segregated schools. The panel considered the advantages of segregated educational provisions in terms of administrative convenience and possible cost-effectiveness and concluded that these could not justify the stigmatization of the child in a segregated environment. The panel recommended to the government that all children should be educated in their neighborhood mainstream schools.

The panel suggested there are not two populations of children in the Hong Kong schools: the able and disabled, but a single population of children and that individual differences are a matter of degree, distributed along a continuum. The panel further suggested that a least restrictive environment for children with special educational needs would permit closer liaison with regular educational services and the full array of educational opportunities and facilities that it offers. Additionally, a more integrated approach could produce important side benefits for ordinary mainstream primary students, including learning to cooperate and help one another.

As a result of the panel's recommendations and an increasing democratization of Hong Kong, the government has evolved policies for a more inclusive educational system. In 1992, the Education Commission's School Education in Hong Kong: A Statement of Aims adopted the educational aim: "..to develop the potential of every individual child.." (p.6). Hong Kong is currently among the more progressive Asian countries in adopting inclusive education practices and identifying and serving at the earliest stages children's individual differences.

The Constitution of India states that the state will provide free and compulsory education to all the children until they achieve the age of 14. In the India Country Study, dating from 1984[31], it is stated that efforts to help the disabled have concentrated on welfare and rehabilitation rather than on education. While specialized institutions have been established for various categories of the impaired, their coverage is extremely limited. It is now realized that a large proportion of the disabled can be educated in the regular school setting and only for the severely disabled will specialized institutional arrangements be

31/ UNESCO (1984), Towards Universalization of Primary Education in Asia and the Pacific, Country Studies, India. Bangkok: UNESCO Regional Office.

needed. The Ministry of Human Resource Development has now taken over the responsibility for the education of disabled children in regular school settings.[32]

In Indonesia, every citizen has the right to obtain an education, which is compulsory for children aged 7-13. No exclusions are specified. All children with special educational needs should have the opportunity to attend education with other children. Legislation concerning the education of children with impairments covers all levels from pre-school to post-school. Eight categories of impairments are defined: emotional disturbance, mental retardation, physical handicap, visual impairment, hearing impairment, language disorder, learning disabilities and multiple handicap. At the beginning of the 1980's the government indicated that the special schools would not be capable of accommodating all the impaired children who were spread through the country. Thus Special Elementary Schools (SDLB) were established. These schools were intended to integrate the education of all types of children with impairments at the primary level, and to be located close to regular elementary schools. Since 1983 a policy stating that children with impairments who have adequate abilities are to be accepted into regular schools has been initiated. The integrated children are treated the same as regular children. They can, however, receive additional instruction from a special education teacher assigned to the integrating school if the need arises. The regular teacher and the special education teacher of such children are expected to work together. The country's philosophy regarding special education programs and services is based on the premise that educational opportunities provided to children with special needs should be comparable to those provided to their regular peers. The program for special education is an extension of the regular curriculum, modified as necessary to meet the special and unique needs of the special child, and based on the child's needs and strength rather than on generalized labels or categories.

In Korea, the legal basis for special education is the Education Law of 1949, supplemented by the Promotion Law for Special Education of 1977. Issues relating to special education are dealt with by the Division of Compulsory Education of the Department of General Education in the Ministry of Education. Students with special needs in regular schools follow the general curriculum, while having a specially tailored curriculum. A 1993 amendment to the Promotion Law mandated free education for all school-age children with impairments. In addition to 33 new special schools, planned for the period 1993-98, the government is also planning a number of mainstream initiatives, including 108 branch schools and 3350 special classrooms. In spite of these developments, surveys conducted in the late 1980s indicated that only approximately 12% of children with impairments are accommodated in special facilities.

Children with special needs have been identified in Malaysia as those having learning problems as measured by the degree of functional capability in the following areas: cognitive ability, oral abilities, reading skills, mathematical skills, social behavior, developmental skills

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32/ Ibid., pp.100.

and work skills. The categories of special needs which are recognized by law are: emotional disturbances and social maladjustment, mental retardation, physical handicaps, visual impairment, hearing impairment, language disorders. Legislation was passed which provides an extra two years in primary and in lower secondary school for children with learning difficulties.

In Nepal, the National Program of Action for Children and Development for the 1990s includes a special education program action plan which has five goals: (1) to improve education opportunity to physically and mentally impaired children; (ii) to expand program outreach to areas of high concentration of children with special needs (i.e hills); (iii) to integrate children with mild impairments into main stream primary schools; (iv) to improve facilities for children with severe impairments and (v) to consolidate current NGO efforts for education of disabled children. In the action plan qualitative and quantitative targets are set as well as priorities and strategies. Management and training strategies are specified as well as activities for monitoring and evaluation of the plan. An important target specified is to make special education an integral part of basic and primary education program[33].

Pakistan has a unique organizational structure. Prior to 1985 special education was a small unit within the Ministry of Education. It has been recently elevated to a Ministry of Special Education with a separate budget for the expansion of educational programs. In the Philippines education is compulsory for all children, including those who have an impairment, from ages 7-13, but enforcement is not strict. The categories of impairments among children are mentioned but not defined. The categories mentioned are learning difficulties, physically handicapped, emotionally disturbed, mentally ill and the specially gifted.

The Philippines National School for the Blind and the National School for the Deaf in Manila were established as early as 1907 to provide special education and free lodging to handicapped children. Since then, special education programs have expanded to serve children who are gifted, who have learning difficulties, who are visually, hearing or physically impaired, and those who have speech defects and specific learning disabilities. The policy objective is that children with special educational needs should enjoy the same educational opportunities and privileges as other children. The ultimate goal of special education shall be the integration or mainstreaming of learners with special needs into the regular school system and the community. Section 5, Article 1 of Policies and Guidelines for Special Education specifies that the ultimate goal of special education shall be the integration or mainstreaming of learners with special needs into the regular school system and eventually in the community.

In Thailand, the policy objective is to provide education to all children either in a special school or in a regular classroom. There is a policy of encouraging integration. This

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33/ Ibid.

de facto refers only to small numbers of blind children and experiments done with partially hearing children. Slow learners are considered integrated by attending special classes in regular schools. Education is compulsory for children from ages 7-11. De facto, Primary Education Act B.E 2523 exempts certain categories of children from attending school whenever parents justify that. Among these are physically impaired children, those with learning difficulties, those who have a serious contagious disease and children who have to look after their impaired parents. The administration of special education is undertaken by the special education division of the Ministry of Education.

Box 10: Policy and Practice in Integrating SEN Pupils in Sri Lanka

In Sri Lanka, normalization is the policy objective as regarded to education of children with impairments[34]. Integration of SEN children with normal children in the same school is regarded as the most important contribution to normal living. The first integrated program for visually impaired children was in 1968 with the enrolment of 17 visually impaired children to regular primary schools. In 1971, a committee appointed by the Permanent Secretary and Director General of Education to report on special education for exceptional children recommended the extension of the integrated program to other categories of impaired children. Parents have taken steps to provide infrastructure facilities for special units in ordinary schools. Families have volunteered to assist teachers in the integrated programs, this motivated principals to open up their schools to impaired children. Health and medical personnel refer children to officials of the ministry of education for placement in integrated units although no formal inter-department co-ordination exists. The official policy of integration of children with special education needs improved awareness in society and among the school authorities and marked organizational changes took place. The tendency, however, to create and maintain a parallel separated school system for "these children" is still strong. Education is for all children aged 5-14 including all impaired children. But de facto the law does not enforce compulsory education. It does not specify the type of services to be rendered by the special education authorities. Thus, many children with special needs are not provided with education. For the purposes of providing services the Ministry of Education recognizes the following categories: intellectual limitations, impaired vision, impaired hearing, language and speech problems, behavior problems and non-sensory physical impairments. According to the Plan of Action for the Children of Sri Lanka less than 1.6% of the children with impairments were at that time served. But, there are plans to change and measures are mentioned in the national Plan of Action, including the training of 3,000 teachers for special education, improving teaching aids and setting up 25 district Assessment and Resource Centers by 1995.

In general, child protection legislation and regulation has been furthered by the Convention on the Rights of the Child drawn up at the 1990 World Summit for Children. As of December 1992, out of the fifteen Asian nations included in this study only Brunei and Singapore had yet to sign the Convention[35]. In addition, over half of the nations who have signed the convention have finalized their National Program of Action (NPA) to achieve

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34/ Ministry of Education, Special Education Branch (1988), A Case Study on Special Education in Sri Lanka. Paris: UNESCO.

35/ Ibid., p.61.

basic social goals related to child welfare including education (Bangladesh, China, Indonesia, Japan, Korea, Nepal, Pakistan, and the Philippines)[36]. Hong Kong was not included in the UNICEF progress report. It is perhaps noteworthy that of the NPA received by UNICEF in 1992, 51 had components directly addressing children with impairments. This number has increased to 65 nations by 1993, with more NPA to be submitted[37].

As we have seen in the case of a number of countries, the enactment of legislation or policy documents mandating provision to marginalized children in no way ensures their inclusion in the system. This point is made in the Philippines Case Study where the central administrative systems lack power and the will to demand compliance to policy mandates from the field. In other cases, legislative mandates often lack financial commitment to provide appropriate resources, and are therefore often ineffective. Thus, while many Asian nations seem to regard highly the comprehensive policy models enacted in the U.S. (1975 PL 94-142)[38], the Individuals with Disabilities Education Act (IDEA) and the English 1978 Warnock Report and subsequent implementing legislation[39], progress is still very patchy. Korea's 1977 Act for the Promotion of Special Education for the Handicapped is said to be modelled after IDEA; U.S. educated Malaysian parents of children with mental impairments are using the frames of IDEA to promote a reclassification of impairments and parental involvement in current legislation. Nearly half the country case studies included references to U.S. legislation.

As part of the emerging trend, definitions are also increasingly moving away from the narrow concept of handicaps or disabilities, towards a wider approach emphasizing special needs that any child may have during the course of his/her development, both in and out of school, whether temporary or permanent, and the national education sector's responsibility to address such needs. Additionally, there is a marked movement away from expensive, segregated services, concentrated in urban areas and accessible only to an urban elite, with alternative emphasis on the need to equalize educational opportunities for the poor and those

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36/ United Nations Children's Fund (1993), State of the World's Children. New York: Oxford University Press, pp.60-61.

37/ Gulbadan, H. (1993), Personal Communication. Disability Officer for UNICEF. June 10, 1993.

38/ Education for All Handicapped Children Act of 1975, Pub. L. 94-142, codified as amended at 20 USC Sections 1400-1485 Individuals with Disabilities Education Act (1988), mandates a federal grant program to States, conditional upon compliance with guarantees of "free appropriate public education" at preschool through secondary education levels and individualized program plans designed with parent participation.

39/ Warnock, H.M. (1978), Report of the Committee of Enquiry into the Education of Handicapped Children and Young People. London: HMSO. The Report provided a new prescriptive set of descriptive classifications for what the Report termed "children with special educational needs" and a hierarchy of integration strategies. Since the commencement of this report, further legislation has been passed in the form of the 1993 Education Act, and a Code of Practice has been approved by Parliament and issued to guide schools and local authorities on the implementation of the provision of the Act. See Department for Education (1994), Code of Practice on the Identification and Assessment of Special Educational Needs. London: Central Office of Information.

in remote and rural areas. In the Philippines the term used is "exceptional children", which includes the gifted, the physically impaired and children with special health problems[40]. The Ministry of Education in Malaysia refers to "children with special needs" as children who have various levels of learning problems as well as those who are traditionally grouped under "special education". Nepal includes under "special population groups" low-caste, educationally deprived or isolated ethnic groups, the urban poor, the disabled[41]. In Sri Lanka's "Plan of Action for the Children of Sri Lanka" (1991-2000) the reference "Children in Especially Difficult Circumstances" includes those with impairments, those living on the street, child labor, orphaned and abandoned children, and those affected by civil conflict and the migration of their mothers for employment.[42]

Box 11: The Evolution of Integrative Measures in the People's Republic of China

As seen in Box 3, China has a long history in providing services to children with special educational needs. The evolution of legislation in PRC has followed a similar progressive path. The National People's Congress since 1980 has assumed the responsibility for operating schools for children with special educational needs held formerly by the central and regional governments. Three pieces of highly important legislation passed within the past 12 years have established a firm legal basis for future services' development.

The Constitution of PRC, adopted in 1982 stipulates that all children have the right to education. More specifically, Article 45 of the constitution mandates the State and society to help arrange the work, living and education of disabled citizens. In 1986, the Law on Compulsory Education transferred to regional People's government the authority to establish special schools or classes for children with special educational needs. Additional documents circulated in the same year, refined the terms of reference for including children with special educational needs into the education system.

The landmark Law on the Protection of Disabled People passed in 1990 declares that disabled people have equal rights in political, economic, cultural, social and family life as other citizens. It prohibits discrimination and harassment against disabled people and further decrees compulsory education for disabled children and youth. The 1990 Act additional provides specific guidelines on implementing special needs education measures including the development of policies, teacher training, educational management, teaching methods and adult education. This Act was praised as among the most progressive laws in the world by Disabled People's International. DPI's China affiliate, China Disabled Person's Federation had played a decisive role in promoting the 1990 legislation.

40/ APEID (1984), Towards Universalization of Primary Education in Asia and the Pacific, Country Studies Philippines. Bangkok: UNESCO Regional Office, p.47.

41/ APEID (1984), Towards Universalization of Primary Education in Asia and the Pacific, Country Studies Nepal. Bangkok: UNESCO Regional Office, pp.27-28.

42/ Sri Lanka National Planning Department (1991), A Plan of Action for the Children of Sri Lanka. Colombo: Ministry of Policy Planning & Implementation.

Investments of resources in special needs education have grown substantially over the past two decades. Malaysia took the initiative in approaching the World Bank with a proposal for training and physical development of facilities for special education (referring to children with learning difficulties as well as other impairments) to include financing for study tours, training and experimentation with different approaches prior to finalization of a strategy. Government of Malaysia budgetary allocations for special education, based on non-categorical considerations, have increased from $791,309.00 in 1970 to $16,500,925.00 in 1991. The government of Japan has increased its allocations to special needs education from 3.2 billion yen in 1956 to 493 billion in 1988 (about 150 times over the past 32 years). The Hong Kong Department of Education has similarly increased its contributions to special needs education from US$27.2 million in 1986 to $69 million in 1991 for an increase of 2.54 times. In contrast, public spending on regular primary education increased by 1.84 times during the same period.

The multi-million dollar National Center for Special Education (NCSE), opened in Bangladesh in 1992, has a dual function, including the first government run school for children with learning difficulties and special education teacher training. In China the number of special schools for the handicapped increased from 292 in 1980 to 650 in 1988. Classes for slow learners have opened in many primary schools, though no data are available on the number[43]. In Indonesia, special education is co-ordinated at national level by the Director General of Primary and Secondary Education within the Ministry of Education and Culture. The state education system provide 45% of services for the special educational needs population. An additional 55% of services are provided by voluntary agencies. The down-side of PVO-government cooperation is the compromises that must be made by the pioneering voluntary bodies to a central educational administration in control of curricular, staff and managerial arrangements.

Special education in Malaysia is administered by the Special Education Unit in the Ministry of Education. The Ministry has responsibility for the education of students who are hearing impaired, visually impaired, autistic and have mild to moderate learning difficulties. The Department of Social Welfare of the Ministry of National Unity and Social Development is responsible for the education of the physically handicapped including the spastics, the moderately severe and profoundly intellectually handicapped. The formation of the National Advisory Council on the Education and Rehabilitation of children with special needs will eventually lead to a national plan of action in special education which should bring about improved collaboration between the government, voluntary organizations and parental groups. In the proposed Third Primary and Secondary Education Sector Project submitted to the World Bank the aspect of "expert training program for the education of pupils/students with special needs" was included. Some of the goals presented in the proposal are to move to the direction of normalization and integration, initiate programs leading to regular education, adapt teaching strategies and methodologies proved successful in other countries,

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43/ UNICEF (1989), Children and Women in China, A UNICEF Situation Analysis. Beijing: UNICEF, pp.117-18.

and improve delivery service by setting up multi-disciplinary and diagnostic teams. Pakistan has established a Ministry of Special Education with special budget and programs. The Ministry has since opened a million dollar center for visually impaired children. Budgetary provisions have been made for building 32 additional special education centers.

Box 12: Pakistan's Policy for the Education and Rehabilitation of Disabled People

In 1988 experts and concerned citizens in Pakistan were assembled to draft policies that would bring people with impairments closer to equalization of opportunities. The committee's proposals included the following:

* Training and stationing at each Basic Health Unit and Hospital of a specialist on the early detection of childhood impairments;
* Establishing district level coordinating bodies to liaise with NGOs and government services for impaired individuals;
* Planing for the integration of children in special education center into mainstream schools;
* Establishing national training centers for vocational rehabilitation;
* Establishing a committee for planning professional training programs;
* Organizing short-term training at the National Institute of Special Education;
* Establishing a cadre of advisors to monitor the quality of Special education; and
* Establishing graduate and post-graduate level training courses.

The Department of Education, Culture and Sports (formerly Ministry of Education, Culture and Sports) is responsible in the Philippines for the administration and management of special education programs and services in the country. The Division of Special Education within the bureau of Elementary Education is responsible for providing the broad framework for special education, assisting field programs, providing braille and large type textbooks and maintaining a balanced education program that promotes understanding of the problems involved in the education of these children and avoids duplication of services. Many administrative and supervisory responsibilities are located at the regional offices all over the country. The school principal is the key person in the education of exceptional children, although the classroom teacher assumes responsibility for the overall educational program of the child. The special education teacher in a self contained classroom in the regular school works under the direct supervision of the school principal and the special education unit of the regional office. In an integrated classroom only one or two children with the same or different impairment are enrolled in the same regular class. Special classes and schools prepare their own curriculum in accordance with guidelines set by the Department of Education, Culture and Sports. In principle the curriculum follows the regular curriculum and is adapted to the needs, interests and abilities of the learner.

In sharp contrast to multi-departmental services and funding seen above, the financing of special needs education in Sri Lanka rests almost exclusively within the ledgers of the Ministry of Education, because most children with special educational needs attend less

costly integrated programs. Total expenditure from other ministries including training and ancillary services amounts to about 9% of total special educational budget expenditure. Voluntary agencies contribute about 4% of services. The Swedish International Development Agency (SIDA) is supporting the Ministry of Education in the area of staff development, development of sign language and establishment of a resource and teacher training center for special education. SIDA is also financing the maintenance and running of a Braille press. Japanese aid has assisted in the in-service training of teachers of hearing impaired children. UNICEF funds are provided for a program of early detection, identification and education of handicapped children in the community. Thus, while the Department of Health provides early medical detection, medical treatment and referral to educational authorities, it is the Ministry of Education which provides educational placement, teachers and teachers training, development of curricula equipment and materials and guidance and counselling services for parents. The Department of Social Services assists special schools and institutions by giving grants, payment of allowance for food and lodging to those attending special schools and institutions, supervision and financial assistance to voluntary organizations and the establishment of vocational training centers. Prior to placing a child in special education there is an educational diagnosis done by a multidisciplinary team. Parents are consulted about the type of service and placement of their child. Voluntary organizations provide counselling of parents, pre-school training, specialized services, referral of children, organization of private institutions, provision of materials and equipment, providing aid to families and vocational training.

The Financial Implications of Introducing Provision for All SEN Children

While none of the nations in the study has specifically mandated integrated education, nearly all case study authors reported that governments regarded the integration of children with impairments in ordinary schools as the ideal and the least costly approach, although they recognize that inclusive education can be administratively difficult to manage and generative of additional costs. Thus, policies mandating education for children with special educational needs in a range of settings will have little meaning without appropriate resource allocations. What will be the additional resource implications of integration and what are the alternatives? The answer to that question depends on what kind of provision is envisaged. If segregated special education is to be provided for all children with special educational needs, the cost will be enormous and prohibitive for all developing countries. At the other end of the spectrum, if integrated in-class provision with a support teacher system is envisaged for the vast majority of children with special educational needs, then the additional costs can be marginal, if not negligible.

Box 13 illustrates the teacher:pupil ratio and unit cost differentials between regular education and special needs education in integrated and segregated classrooms and schools. Caution is needed in interpreting the data due to the unevenness of reporting of financial data and the lack of detailed information about which system of integration has been adopted. Although there are, for example, a range of distinguishable ways of providing integration, as illustrated in Box 25, there is no common practice and a range of legitimate conceptual

interpretations of 'integration' exist, from centers to classes though various methods of "blending" across time, space and curriculum to full integration of SEN children into ordinary classrooms for the whole of the curriculum. Moreover, the special educational needs unit costs are averages of specialized services that range from minimal to extensive extra provision over regular education. Cost data for some of these categories were not reported or were skewed. Thus the normal formulae to derive unit costs (the gross cost of the service over the gross enrollment in the service), have to be seen as highly contextual.

The most obvious, but not surprising, feature arising from Box 13 concerns the comparative costs between regular schools and segregated education for children with impairments. The range of unit costs for both regular and special services is enormous, and the types of integration and segregated approaches to service delivery are equally disparate in cost terms. For example, in Japan in 1990, the cost per student in regular elementary school was US$5,583, while the cost per student in special education was US$57,167, or 10.2 times the cost for regular education. No data was available for integrated education. In Thailand the annual unit cost for educating a visually impaired pupil in a fully integrated setting is $688 ($130 more than the ordinary unit cost) versus $755 in segregated schools. The unit cost for an integrated hearing impaired student is $543, a few dollars less than the regular pupil unit cost because of subsidies provided for equipment. The average unit cost of $847 at schools for the deaf is substantially higher due to the associated pupil residential costs. In contrast, the unit cost for educating a child with moderate learning difficulties in segregated, day institutional settings is $503 with no corresponding information reported for integrated settings, but the certainty that due to economies of scale the figure is substantially higher than $503.

The cost-savings from integrated education in Bangladesh appear to be significant. It costs an average of $203 to educate a visually impaired student in integrated settings and $412 in segregated settings. In Hong Kong, the unit cost for a visually impaired pupil in a special class in the ordinary school is $3,140, compared to $4,872 for a visually impaired pupil in a special school. The integrated and segregated differential for hearing impaired pupils in Hong Kong is $4,695 and $7,793. Resource classrooms in ordinary schools for children with mild learning difficulties cost $1,899 per pupil while educating the same category of pupil in special school costs $4,351. In India, the unit cost of educating a variety of children with special educational needs is only $1 more than regular education, while the average unit cost in segregated special schools across categories is $33. The standard unit costs will vary according to the type of educational setting for children with special educational needs.

As can be seen from the above, costs vary substantially not only among countries, but across a single country according to impairment category as well. For example, in Hong Kong the unit cost by impairment categories in 1991/2 was as follows: visually impaired children, $3,140; hearing impaired children, $4,695; physically impaired children, $10,023; and children with severe learning difficulties, $2,605. The differences in unit costs among categories can be explained inter alia by the additional costs for adaptive and assistive

equipment required for braille and mobility instruction. Hearing impaired children in better-off schools will have, for example, classroom amplification systems as well as individual hearing aids that may be provided by the school or service. Pupils with mild to moderate learning difficulties will typically not require expensive assistive equipment. Although policy makers in the past have regarded integrated education as more expensive than the regular "stream" of segregated education, due to the additional costs of specialists and the costs of ordinary teacher in-service education, they also believe that the results of integration justify the investment of money, time and effort[44]. The Hong Kong Case Study provides evidence that in the case of that education service the cost of integrated education is about half that of segregated special schools.

But, while the cost of providing segregated education for all children with special educational needs is clearly prohibitive, bearing in mind that in most developing countries only a tiny minority of such children are schooled at all, integrating SEN pupils into the regular system may also cost more initially for the following reasons:

a) initially more favorable teacher pupil ratios (on average approximately 1:15 (but only for the SEN portion of the class) against 1:29 in classes of regular students, but 1:8 in segregated settings);

(b) additional incentive pay to specialist teachers in some places;

(c) the additional expense of remodelling and reformulating initial and in-service teacher training;

(d) required architectural modifications to buildings for greater accessibility;

(e) assistive equipment and instructional materials; and

(f) associated costs in transporting some of the children to school.

In addition to these costs, however, several factors contribute to the much higher costs in special sector segregated settings over integrated settings, yielding additional costs in educating children with more complex educational impairments, such as: 1) separate administrative overheads, 2) separate physical plant costs, 3) higher transportation costs compared to neighborhood integrated schools; 4) maintenance of pupils at residential schools (and allowances to parents as in the case of Japan); 5) costs of fund-raising for those segregated schools that are privately run but partially government subsidized; and 6) a more favorable SSR and additional ancillary staff. On the other hand, some segregated, NGO-run facilities do have some cost advantages at present because they typically 1) pay their teachers

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44/ Visit Panel to Hong Kong (1982), A perspective on Education. Hong Kong: Government Printer, p.80.

less; 2) have a volunteer management committee; and 3) can generate sizeable income through civic and charitable donations and other fund-raising mechanisms.

Box 13: SSRs and Unit Costs for Regular and SEN Pupils[45]

COUNTRY	Teacher: Regular Pupil Ratio[46]	Average Teacher: SEN Pupil Ratio (Integrated)	US$ Unit Cost Per Regular Pupil	US$ Unit Cost Per SEN Pupil (Integrated)	US$ Unit Cost Per SEN Pupil (Segregated)	**Cost Ratio SEN-Regular Integrated (Segregated)**
Bangladesh	1:63	1:7 (10)	14	203	319	14.5 (22.0)
Brunei	1:15	1:12 (NA)	759	(NA)	817	- (1.1)
China	1:22	1:6 (12)	88	(NA)	137	- (1.6)
Hong Kong	1:27	1:8 (22)	1,224	3,224	8,741	2.6 (7.1)
India	1:46	1:9 (33)	5	6	33	1.2 (1.2)
Indonesia	1:23	1:4 (NA)	14	21	432	6.6 (31.0)
Japan	1:21	1:3 (O5)	4,824	(NA)	45,000	- (9.3)
Korea	1:34	1:7 (10)	117	186	268	1.6 (2.3)
Malaysia	1:20	1:7 (13)	80	(NA)	2,400	- (22.0)
Nepal	1:37	1:8 (NA)	5	(NA)	120	- (24.0)
Pakistan	1:41	1:9 (NA)	36	(NA)	344	- (9.5)
Philippines	1:33	1:11 (NA)	(NA)	(NA)	245	- -
Singapore	1:26	1:9 (NA)	1,175	(NA)	2,350	- (2.0)
Sri Lanka	1:22	1:8 (15)	40	(NA)	132	- (3.3)
Thailand	1:19	1:9 (11)	558	543	600	1.0 (1.1)

So, the data for SSRs have to be treated with extreme caution. Box 13 indicates clearly that the SSR in segregated settings is much more advantageous for special schools than for regular schools. Thus, to the extent that any pupils are being accommodated in special schools, who could be accommodated in regular schools, there is an additional substantial burden on primary school costs, where teachers salaries usually form the bulk of expenditure. There are vast differences in the ranges between countries and within a single

45/ Costs and exchange rates are as of June 1993.

46/ United Nations Education, Scientific and Cultural Organization (1992), Statistical Yearbook 1992. Paris: UNESCO, pp.3-91.

country for different kinds of provision, from Bangladesh (1:63 compared to 1:7) to Brunei (1:15 as compared to 1:12). The SSR figures for provision in integrated settings indicate a similar range, but are all substantially less favorable (less expensive) than in segregated schools. The case of India is instructive, as that country has now had major experience in absorbing children with special needs into the ordinary classroom and providing appropriate training for the teachers. Its model of integration has thus been the least expensive approach. The SSR for SEN pupils integrated (but only for those pupils, is 1:33 in comparison with 1:46 for regular pupils and the unit cost (only for the SEN children is US$6, as opposed to US$5 for regular students. The unit cost in segregated settings is five times that figure.

Thus, the message of this section is clear: **that the descending order in unit cost terms as well as least restrictive environment terms is: a) special school classes, b) special classes in ordinary schools, and c) fully integrated ordinary classes.** Probably, the vast majority of children with minor impairments can be accommodated in ordinary schools at little increase in unit costs, although a redefinition of teachers' responsibilities and training would be necessary. All teachers would need to be provided some additional in-service training and a redefinition of roles would need to be undertaken to allow, within existing SSRs for the training of resource or support teachers and perhaps teachers' aides. Both of these tasks could theoretically be undertaken within existing financial parameters, but, in practice, there will probably be marginal increases in costs, at least initially. In the longer term, any marginal additional costs to the regular system may be expected to decline, as improvements introduced to accommodate SEN pupils yield increased efficiency and quality (for example reduced repetition and drop-out) for all pupils.

This section has presented an initial and tentative overview of some of the major arguments involved in trying to achieve a valid comparison of costs for segregated and integrated provision for SEN pupils, including the cost differentials between ordinary education on the one hand, and the two alternatives of integrated and segregated special needs education on the other. The cost data presented in Box 13, while confirming the notion that special needs education does cost more than regular education, offers justification for alternatives to the even costlier segregated special needs schooling for a majority of SEN children. Moreover, when solely in-class integrated provision is considered, the costs are marginal indeed, and likely to be non-permanent after the initial phase.

In addition, however, the wider economic benefits from providing universal primary education that includes children with special educational needs must also be considered. While the calculation of long term cost benefit is beyond the immediate scope of this present study, it is clear that a potentially productive member of a community is worth more socially and economically to that community, than someone condemned to lifelong dependence. Further research is needed to determine the outcomes for those who complete special needs education and to discern those direct and indirect benefits that accrue, for example cost savings where social safety nets such as welfare payments to disabled adults and their

families are in place[47]. Evidence is also needed regarding the increased earnings and productivity for the adults with impairments who have received a relevant education. Integrated education in its great variety of forms is a substantially less costly method of providing for children with mild to moderate impairments, including children who are blind, than is the alternative in segregated settings. As indicated above, any unit cost increases for the integrated education of the vast majority of children with special educational needs may, in the long term, be absorbed into the greater efficiency of functioning from initiatives which improve the quality of education for all children.

Principle 2: Commitment to a Child-Centered Philosophy of Education

Traditional approaches to teaching, such as whole class approaches, rote learning and group recitation, are familiar to many cultures in Asia, and they are easier for teachers to deliver. But they cannot, by and large take account of the increasing diversity of learning styles and background, with which primary schools are now being faced, as is manifest in the low attendance and high repetition and drop-out rates in many systems, for which faulty pedagogics is one of the commonly stated reasons. While the majority of case studies do not address the detailed issues of curriculum content, they do identify such groups as street children and delinquents who are out of school and are taught functional literacy and numeracy skills and daily living and vocational skills through non-formal educational systems in countries such as Thailand, India, Korea, Philippines, and Bangladesh. They highlight the methods of instruction used in non-formal education, which often appear more participatory and ecologically relevant, with instruction often paired with practical experiences, as mentioned by reports from Bangladesh and Philippines.

Under the developing paradigm for primary education in the Asia region, the growing belief among educators is increasingly that all children have a capacity for learning. Parents, teachers and administrators are developing an expectation that children with special educational needs can learn and progress and that teachers have a responsibility to assist the child in that process. Thus, children are beginning to be nurtured with a powerful and realistic message of confidence in their ability to develop. Teaching is directed toward each child's strengths and success. Mistakes and difficulties are viewed as important elements of the learning process and can be overcome. For learning to occur, the content, level and pace of instruction must be appropriate to the child's abilities, relevant to the daily life of the child and to his/her individual needs. Indeed, there was a trend among the nations in this study from the otherwise academic curriculum to greater responsiveness to the daily life of children

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47/ Some studies argue that costs decline over time for children who receive early services and that any additional investment in special programs is reimbursed to the community many times over through output and taxes, concluding that for every dollar spent on special education, the individual will earn eleven dollars as an adult. See Wood, M. (1978), "The Economics of Special Education in a Developing Country". In A. Abeson and F. Weintraub (Eeds), International Perspectives in the World future of Special Education. Reston, VA: Council for Exceptional Children; and Conley, R. (1975), "Issues in Cost-benefit Analysis of Vocational rehabilitation Programs", American Rehabilitation, 5 (3), November/December.

with special educational needs who are not coping with the regular primary school curriculum. Children are increasingly seen as active participants and teachers use multiple teaching modalities to activate the learning process. Box 14 summarizes the shift involved in this new "belief" from the more traditional philosophy toward a new framework that places the child and his/her individual needs at the center of educational programs.

Greater flexibility is emerging in some countries in curriculum content, delivery and the pace of instruction that better matches the children's learning speed, styles and capacity for progress, and focusses the child in the direction of success rather than condemning it to failure. In many cases, this implies a new concept of partnership between pupil and teacher, school and home. Organizational flexibility is an additional response to individual requirements that are in harmony with the conditions of the local community. Adaptations are also moving towards more flexible school hours and coordination among formal and non-formal educational programs. Cooperation and coordination is strengthening between special education and regular education programs and educational units as the systems work toward a continuum of educational placements for a range of children's needs. Several countries, including Hong Kong, Japan and Korea, drawing on the normalization principle, have also focussed this criterion of child-centeredness on buildings by prescribing greater physical accessibility. All of these developments may be seen under the heading of child-centeredness through the curriculum and its delivery.

Changes in policies and practices have begun to address a philosophy of education in which the needs of the individual student determine to some extent the kinds of educational programs that are developed and the ways, in which they are delivered. The progression, the pace and the location of learning activities do not depend exclusively on the teacher, but on the very needs of the population and the characteristics of its activities. This does not, of course, imply that all the teaching is on an individual basis, for in addition to being impractical, this would exclude important dimensions of social and cooperative learning. Rather, it implies a mixture of approaches, rather than concentration exclusively on whole class teaching. Many developing countries have accepted the concept of an Individualized Educational Program (IEP) for students with special educational needs and have sought to incorporate to the extent possible those with mild to moderate impairments into the school system. (See Boxes 15 and 17.) More widely accepted now is the concept of each child having a distinctive personal profile of abilities or competencies, what has been called multiple intelligences, and that education should help the child increase abilities in all of these. There is also an increasing developmental emphasis on designing accommodations and adaptations of instruction and curriculum, centered around the individual needs of the child at the particular stage and school.

In many countries in Asia, students with visual and movement impairments already follow the ordinary curriculum without much difficulty. The teaching and learning styles, however, are adapted to utilize braille and tactile aides for visually impaired pupils and adaptive writing devices for students who have more severe physical impairments. In China, India, Japan, Korea, Indonesia and Thailand among others, the national curriculum is

followed for all SEN students, with the exception of children with moderate to severe learning difficulties or mental handicap. Needed adjustments are made in the teaching methods to meet the specific learning modalities of children with sensory impairments. In Thailand, for example, the second edition of the Thai sign language book has been recently published and is used in most schools where the deaf are taught. Most hearing impaired children integrated into classrooms in Thailand are termed 'hard of hearing' because they can cope in an oral environment even though the hearing loss may be severe. But of course that places new demands upon the skills of the teacher, for which additional training is necessary.

Box 14: Education is Child-Centered: Every Child Is a Learner

Traditional Pattern	Child-Centered Pattern
* Teacher centered approaches	* Child-centered approaches
* Teacher-focused schooling	* Learning focused schooling
* Rote content based curriculum	* Problem solving based instruction and life-centered
* Passive learning	* Active and participatory learning
* Culturally detached	* Culturally sensitive programs
* Failure is the norm	* Success-oriented philosophy
* Information and knowledge based	* Process-based learning
* Formal written examinations	* Continuous, performance-based assessment

Many countries in this study have begun to introduce remedial measures into their newly developed curriculum, revealing an understanding that there are children who are not learning as expected and that they need special interventions. But the meaning and application of remediation needs to be better understood by teachers in order to become an effective tool to aid children with learning problems. For this reason, it is important that more attention is paid in initial and in-service teacher education to varying strategies for remediation. In some countries too, automatic promotion of primary school pupils from Grade I to Grades III, V or VI has become the standard policy to prevent students from repeating grades, to decrease dropout, to improve learning and reduce unit cost. Yet it remains unclear to many teachers how they can help students benefit from education when promotions occur despite what they perceive as poor performance and progress. They may not realize that performance is as much a function of successful teaching as it is of any inherent mental capacities on the part of the child. New methods for motivating children and for remediation and special support are, therefore, being developed and practiced by teachers

to mount more effective responses in serving children with "special" needs, often blending provision between regular and special approaches, as in the approach in Japan is described in Box 16.

Box 15: A Curriculum Strategy for Integration: The IEP

Integrating children with special educational needs into the mainstream organization and curriculum of a primary school does not imply that all children receive the same curriculum at the same pace and in the same way. A main feature of special education for many years has been the "Individualized Educational Program" (IEP), mandated in the frequently emulated American special education law, IDEA. An IEP is basically an individualized syllabus that incorporates a modified school curriculum. Korea, Malaysia, Sri Lanka, China, Nepal, Indonesia and Thailand are among the Asian countries to have instituted IEP in their classrooms, units and schools that accommodate children with special educational needs. Malaysia has plans to implement individualized educational plans for children with special educational needs, as well as an individualized development plan. Japan adapts the rigorously academic curriculum to a 'course of study' that suits the categorical requirements of pupils with impairments. In Korea, the IEP is highly stressed at teachers training colleges. All Korean children with special educational needs receive two IEPs: one with long term educational and vocational goals and a short term IEP that serves as a periodic lesson plan. In Thailand, recent research has provided evidence that hearing impaired students who are guided by an IEP in integrated classrooms not only perform significantly better than those without an IEP, but expressed more interest in their studies. Teachers using the IEP expressed that the IEP was an appropriate educational innovation[48].

Other countries are reported to be tailoring national curricula to accommodate pupils with special educational needs. In Singapore, where all students with special educational needs are taught in separate schools run by NGOs with government grants, children with hearing and vision impairments follow an adapted national curriculum to prepare them for integration at the secondary school level after they take and pass the primary school examination. Hearing impaired or hard or hearing children are placed at a particular disadvantage when the medium of instruction is in the local language without the support of a sign language system. For this reason the integration of hearing impaired children into the ordinary classroom is made difficult unless the teacher or support teacher and peers learn sign language.

The beginnings of a gradual movement towards greater child-centeredness can be perceived in Bangladesh. For example, although the topic of in-school children who are not achieving has apparently been studied only minimally, it seems that there is increasing awareness, and practices to match, of the existence of children who do not progress as expected and may need extra help. Consequently, remedial measures are incorporated in the teacher's guide for the new curriculum. An In-Country Workshop on the "Identification of

48/ Arrayavinyoo, P. (1992), "An Experiment on Applying Individualized Education Plan for Children with Special Needs in Thailand". Bangkok: Srinakarinwirot University Mimeograph.

Learning Difficulties and Remedial Teaching" was organized by the Directorate of Primary Education, with the support of UNESCO/UNDP, under a technical assistance program in 1990. More recently, and from 1990 as part of the General Education Project, this aspect of the work has been intensified, with curriculum development in the form of an essential learning curriculum (ELC), a concept very similar to the curriculum entitlement proposed in this report, a program for **continuous pupil assessment** (CPA) has been introduced, with accompanying teachers guides and pamphlets as part of recurrent in-service teacher education delivered in school clusters.

Box 16: The "Tsukyu" Resource Room System in Japan

One way of providing a new individually oriented service blended with the regular classroom is the "tsukyu" (part-time special class system). This approach is aimed at making more flexible services possible for students who are not responsive to instruction or who are disruptive in class. These students may evidence problems in reading, arithmetic, or other school subjects, in social adjustment or motivation, or in basic skills such as language and perception. It is quite clear today that the great majority of difficult students, however, remain in the regular class with almost no supervision by the teacher. "Tsukyu" is a promising alternative to segregated, self-contained facilities. This model permits the student to receive instruction individually or in groups in a special room outfitted for that purpose. This new type of service can be one alternative for handling below-average learners, similar to the "resource room" model. Many students presently enrolled in regular classes will be served in "tsukyu" settings. This model was implemented on a trial basis at the national government level in 1992, and its full-scale implementation was scheduled to start in April 1994[49].

During field visits to schools in Bangladesh, questions about remediation were responded to by statements such as: "It is in the teachers guide, and it is taught in the in-service training"; "If a child fails the exam during the year, he has another opportunity to do better in the exam at the end of the year". The new curriculum includes **automatic promotion** at least from Grade I to Grade II. In all schools visited, Grades I and II were grouped together as one class (even if that meant 80+ children). Whether this is "automatic promotion" or merely part of the ubiquitous "economy" in the deployment of teachers remains to be determined. Head teachers and teachers indicated that they estimate that, even with the new curriculum, about 15% will not pass the examination and be promoted to Class 3.

In government schools, children with learning difficulties are often perceived not as the schools' concern but as the parents' problem. Children who have difficulties in school are left to sit in class, and their parents are asked to help the child learn. Lack of teacher's commitment intensifies the problem. Private schools have a big enough demand to avoid addressing the children who are not doing so well. In most private schools, if a child has

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49/ Yamaguchi, K. (1992), Tsukyu: A New Educational Service to Students with Special Educational Needs. Report to the Ministry of Education, Science and Culture, Tokyo.

learning difficulties, he/she is told to consider another school. In Malaysia, the 1986 primary grade assessment test showed that the difference in student's achievements between the urban areas and rural districts was a substantial gap of 21%". It stated (para 2.23), that the intention was that all schools would be staffed by teachers with special functions such as remedial instruction, guidance and counseling, library services sports and media. Annex 5, a Plan of Action on Policy and Institutional Development, contains further details, indicating (para 1.02) that remedial instruction methods have been introduced as well as student achievement evaluation and multi-group teaching in the teacher training curriculum, and teachers with special functions will be deployed in secondary schools.

Box 17: Towards an Individualized Educational Program (IEP) for All

As in many Asian nations, quality education for children with special educational needs in Thailand, relates to the appropriateness and relevance of instruction to the child's learning biography. The IEP is an individualized curriculum or learning program that is based on a child's learning styles, strengths and special needs. The context of an IEP melds national curriculum requirements with the child's interests and environmental needs. A typical IEP contains background information on the child including a learning profile and long and short term goals prepared in consultation with the child's parents and representatives from related educational or health/rehabilitation services. The IEP is used by all who come into an assistive relationship with the child.

A controlled study conducted by Arrayavinyoo (1982) on the effectiveness of IEPs, IEPs for children with SEN in the first grade measured the academic and social performance of children with IEPs compared to the matched control group who were guided by an IEP. The results of the study found the performance of the 32 children with an IEP was significantly higher than the control group. More importantly, the children in the experimental group expressed greater interest in their learning. The teachers using the IEP expressed enthusiasm for the approach because it provided an informed structure with a built in continual monitoring device.

In Thailand, an IEP is not mandatory. However, most teachers apply IEPs for physically and mentally impaired children in special schools. At present it is not yet present in mainstreamed schools. In Korea, Sri Lanka and Japan the IEP is applied to a wider range of children including children who require accelerated learning to challenge their giftedness and talents.

In Sri Lanka and according to a survey conducted in 1981 nearly 15% of the primary school population falls into the category of slow-learners[50]. "The majority of the slow learners have failed to achieve the minimum required standard in the three basic skills: reading, writing and mathematics. It is these slow learners who receive the least attention at school. The causes of slow learning may include lack of motivation; emotional disturbance or maladjustment; absenteeism or irregular attendance; defective hearing/vision; malnutrition

50/ APEID (1984), Towards Universalization of Primary Education in Asia and the Pacific Country Studies Sri-Lanka. Bangkok: UNESCO Regional Office.

and chronic health problems." In a more recent study[51], findings derived from the analysis of study data, show that nearly one-third of the pupils in the deprived schools studied are unable to read even three to four letter words at the end of the second year, write their own name and identify letters in the alphabet. The study also showed a significant regional disparity among disadvantaged schools in the achievement of Mathematical concepts in all five primary years level[52].

Box 18: Learning from the Same Curriculum through Sign Language

As in most nations in Asia, Thai children who are severely hearing impaired follow the ordinary school curriculum, but through sign language supported by oral dialects. Thailand has been one of the few countries in Asia, India is a second, to use signed language as the main medium of instruction for severely deaf children. The controversy of oral versus manual or signed approaches to deaf education has waged for decades in most parts of the world. The issue at stake concerns the rights of severely deaf people to speak their 'mother tongue', signed language, rather than conform, often not so well, to the majority dialect. Thailand has accepted sign language as a legitimate language and has produced one of the earliest sign language dictionaries. Nepal, by contrast, did not have a sign language dictionary until 1989 because of the often embittered ideological differences between deaf educators and the deaf community. The deaf community in Nepal developed their own dictionary with external funds and coordination. In Thailand, the Thai Association for the Deaf in collaboration with deaf adults developed their dictionary in 1978.

The argument raised by antagonists to sign language centers on the limited communication encountered by deaf sign language users in an oral society. In Thailand that argument is abated by the simultaneous interpretation of news broadcasts and debate programs on two mainstream Thai television stations - channels 9 and 11. Increasing numbers of Thai citizens, especially those in integrated school settings and those who come into contact with deaf people are learning sign language. The norm is shifting as the Thai society is accepting the diversity of its population, including those who will never clearly speak oral Thai.

In Malaysia, where it is reported that 1 in 3 of children with special educational needs have communication difficulties, an alternative language system is being developed based on a vocabulary and teaching system using key Malay words from Malay sign language. This assistive communication system is used for children who have profound learning and language difficulties and those with severe, speech limiting cerebral palsy and additional impairments. Malay based research into the efficacy of the system appears to confirm its benefits.

The integration of deaf sign language users is made difficult by the lack of mainstreamed teachers skilled in sign language, and moreover, by a growing reluctance on the part of the adult educated deaf community to allow their deaf culture to be linguistically compromised through oral language education. The controversy is more alive in northern Europe and North America where a majority of members of deaf communities insist that children born of hearing parents should be sent to 'deaf' homes for weekends of deaf enculturation. Deafness to them is not a disability. It is more a problem of non-diversification among monolingual cultures.

51/ Ekanayake S.B., Sedere M.U. (1989), Disparity in Achievement, A Case Study of Sri Lanka. Maharagama: Research Division, National Institute of Education.

52/ Ibid., pp.49-50.

In Bangladesh, during field visits, education staff indicated that they felt that a large number of children dropout because they fail to learn as expected. The reasons given for possible learning difficulties were: (i) many children come unprepared for learning, and the "preparatory curriculum", which is a small part of the first grade curriculum, is not taken seriously by teachers; (ii) there is no curriculum for "baby class" (even when there is a baby class); (iii) parents cannot help their children; (iv) the level of motivation among children and parents is often low; and (v) for many children teachers make learning to read a burden and not a pleasure. They also stated that at present remediation is addressed very marginally in teacher training and is not practiced in classrooms. Reasons mentioned were: (i) teachers do not have enough information and knowledge in remediation; (ii) lack of teachers commitment; (iii) short teaching time (Grades I and II learn only 2 hours per day), and an overloaded curriculum; (iv) too many children in the class; and (v) lack of teachers creativity. Evaluation and remediation are theoretical concepts that are not within the cultural milieu of many teachers and while being mentioned theoretically, neither teacher trainers nor teachers have a model to learn from. Teachers often do not understand the practices of delivery and use of remediation or child centered education. Thus, there seems to be a need for remedial practices in primary school, there is currently no university or teacher training institute in the country which has training for remedial teaching. The aspects of remediation and child centered education need to be studied in the country's cultural context: only then, perhaps, it may be better addressed in curriculum development and training and become a technique teachers can use to teach children who are slow to learn or have difficulties learning and are at risk of dropping out.

In China, on the other hand, still little attention is given to in-school children with learning difficulties. Some work in this area has, however, been initiated in a few provinces and by the National Special Education Research Society. In a report[53], it is stated that while visiting a regular school the principal explained that children who can not keep pace with the others would be coached until they caught up, and if they still could not master the work, they would be sent home where the parents would take charge of the problem by teaching the child at home. In Malaysia, a balanced approach to curriculum is taken. Students with special educational needs are required to follow the national curriculum, but modifications are allowed at the school and district levels. A newly formed Primary and Secondary School Curriculum Implementation Committee has accepted the guidelines that 1) modification is at times necessary due to functional restrictions; 2) substitution to the national curriculum may be necessary when modification is not possible; 3) omission of certain parts of the national curriculum may also be necessary; and 4) a disability-specific curriculum may be needed to accommodate for learning through braille, sign language or other assistive devices.

53/ Wright A. (1988), "The Place of People with Disabilities in Chinese Society: Assorted Impressions Based on Short-Term Study Visit" (unpublished). New York: World Rehabilitation Fund Inc.

Box 19: A Model of Curricular Adaptation for SEN Children in Indonesia

In Indonesia, as in most other Asian nations, integrated education is available only to students with low vision and blindness who follow the ordinary school curriculum with the alternative use of braille and oral examinations. The government has plans to extend integrated education to other impairment categories. At present there are three models of schooling for children with SEN. There are 525 residential schools, 209 special cross-categorical elementary schools and 85 integrated schools where blind children are blended with sighted students and other SEN children are educated in separate classrooms in ordinary schools and follow a modified curriculum.

Students with hearing impairments and deafness can follow the ordinary school curriculum but with an emphasis on language skills development. These students additionally follow a second, more functional curriculum that stresses sensorimotor skill development, alterative communication systems and vocational instruction.

For students who fall within a range of learning difficulties (mental handicap), a variety of teaching curricula have been developed to provide an appropriate education. Students who have mild learning difficulties in the ordinary school can be excluded from the full load of academic instruction which is often geared to examinations. Students with moderate learning difficulties are taught functional literacy and numeracy skills as well as vocational skills. Children with severe and profound learning difficulties are often taught in separate units or day care centers or receive home instruction. They are provided with instruction that leads to independent daily living and social competence. They are additionally taught social and leisure skills and vocational and domestic work skills based on home and community conditions.

Among the nations reporting, Singapore, Nepal and Bangladesh have designed, through their local institutes of education and local specialists, national curricula for each impairment category. These curricula have been approved by their respective Ministry of Education and are conveyed to teachers through pre-service and in-service education. An additional feature of disability specific, criterion-based curriculum is its utility in functional assessment and tracking and communicating development to those concerned. Once again, specific skill areas are identified for inclusion in a revised teacher education, such as monitoring, reporting and communicating children's progress in a diagnostic, supportive and useful way, which can be incorporated into overall and varied teaching/learning strategies.

Principle 3: Emphasis on Success and the Enhancement of Quality

If primary education is to be more effective for serving a greater diversity of children, then schools need to be more responsive to pupils' needs and teachers need a larger more differentiated repertoire of teaching strategies, as well as the capacity to conduct curriculum improvement and adjustment so as to deliver educational programs which are appropriate for all children. Above all, a shift in philosophy is needed from the more traditional orientation to educational practices to a new framework of success orientation, flexibility and accommodation of diversity: one which accepts the concept of universal educability, namely that all children are capable of learning. This implies two things; firstly overcoming the

fragmentation of the child and its needs, and secondly replacing the current failure syndrome of much of primary education by an ethos of success. Educational planners and educators need to be clear about the kinds of assumptions that reside in the deep structure of the policies and strategies they select to intervene in problems of school dysfunction. Their particular orientation to educational success and failure will affect their choice of response, and the bases on which they will construct their projects and other interventions.

Three alternative orientations to school dysfunction may be perceived in the literature of primary education and the design of educational projects in developed and developing countries alike: **child deficit**, where the full responsibility for failure is placed on the child; **environmental** deficit, where the genesis of failure is located in the social and cultural environment of the child; and, the **contextual** approach where the task is seen as being to specify the conditions under which diverse students can achieve optimal learning and success[54]. Clearly, this latter orientation represents a greater affinity with the concept of the inclusive primary school than the other two. Connected with this latter paradigm is the consideration of the interaction between primary variables, such as the biochemical and psychosocial environment and secondary variables, such as aptitude, learning experience and receptivity, which could be mediated by specific interventions, such as micronutrient supplementation, deworming and schooling characteristics. For example, many current approaches to improving school achievement are beginning to apply a different set of assumptions from those in the past, emphasizing that it is inadequate to focus simply on the assessment of child-deficits or environmental deficits alone.

Factors in the child and factors in the environment interact in different ways and may vary for each child over time, as may also the needs associated with that child. Therefore, strategies must be adopted to assist teachers, schools and systems to be more responsive to the increasing diversity of children and their needs, to maximize their potential and to make certain that their orientation is to success. Such approaches demand varied teaching approaches and flexible content, which can draw on well-designed texts and materials, offering a varied series of approaches to motivating learning. Not all children will learn from the same material and stimuli, in the same way and to catch all in the net of learning, and to improve the quality of primary education per se, but also to reduce the substantial waste of financial and human capital resources manifested in the high rates of non-attendance, under-achievement, grade repetition, drop-out and non-completion of current systems, new approaches are needed to the way in which primary education is conceptualized and delivered. Moreover, over the long term initiatives to include children with special educational needs in the regular primary schools could actually save money and improve quality, maximizing the utilization of scarce investment and recurrent resources and improving human learning.

54/ See, for example, Wixson, K.K., & Lipson, M.Y. (1986), "Reading Disability Research: An Interactionist Perspective", Review of Educational Research, 56, pp. 111-136.

Box 20: Comparison of Educational Failure Paradigms

PARADIGM	ASSUMPTIONS AND STRATEGIES
Child Deficit orientation (medical model)	The cause of failure resides within the child's physical body[55]. Children do not realize satisfactory achievement in school due to inadequate cognitive, behavioral, sensory, motor, linguistic, medical and/or physical characteristics[56]. Just as a disease is understood as the exclusive property right of the infected individual, so too learning problems are conceptualized as the "exclusive" property of the student[57]. Intervention strategies involve assessing student attributes and include strategies such as correcting conduct disorders, and remediating for sensory defects and other deficits.
Environment-deficit orientation (Behavioral model)	While factors internal to the child may make the child more or less responsive to certain external stimuli, such unseen processes are not the chief cause of student failure. Since behavior is learned, children fail as a result of inappropriate or inadequate environmental circumstances in which they learn. Intervention strategies that reflect this orientation involve assessing attributes of the learning environment and include those that focus on the relationship of teacher characteristics to student achievement, teacher-student ratios, classroom arrangements, parental school involvement, and socioeconomic status.
Contextual or Sociological paradigm	Learning and behavior problems are not a result of within-child deficits or environmental inadequacies, but the product of inappropriate child-environment interactions[58]. Approaches to remediating learning disabilities are shifting away from the search for causes within the student and toward specifying the conditions under which different students can and will learn and succeed[59]. Intervention strategies involve assessing child-environment interaction and include measures of teacher-student interaction, peer interaction, and parental support for education.

55/ Golby, M., & Gulliver, J.R. (1985), "Whose Remedies, Whose Ills? A Critical Review of Remedial Education". In C.J. Smith (Ed.), New Directions in Remedial Education, London: Falmer, pp.7-19.

56/ Salvia, J. & Ysseldyke, J. (1988), Assessment in Special and Remedial Education (4th ed.). Boston: Houghton-Mifflin.

57/ Fedoruk, G.M. (1989), "Kindergarten Screening for 1st Grade Learning Problems: The Conceptual Inadequacy of a Child-Deficit Model", Childhood Education, 66, pp.40-42.

58/ Ibid., pp.40-42.

59/ Wixson, K.K., & Lipson, M.Y. (1986), "Reading Disability Research: An Interactionist Perspective", Review of Educational Research, 56, pp.111-136.

Box 21: Success Orientation in Curriculum, Instructional Methods and Materials

Traditionally Oriented Curricula:	Framework of Flexibility and Accommodation:
* Teachers transmit information	* Teacher as a resource for learning
* Teachers are remote/non-accountable	* Teachers involved and accountable
* Whole class, lecture approach	* Multiple methods, materials and approaches
* Single culture inculcated	* Multiple legitimate cultures
* Formal single textbook-based curriculum	* Multi-modal delivery
* One teaching method for all	* Differential, varied teaching methods
* Homogenous, unisensory curriculum	* Flexible and enriching curriculum with supplementary content and material
* Fixed hours	* Flexible timetable and school hours
* Class focused	* Group and individual focused
* Rigid age-grouping	* Multiple forms of classroom grouping
* Austere classroom environments	* Stimulating classroom environments
* Few, if any, teaching aids	* Formal and non-formal cooperation
* Formal cooperation only	

Many of the more recent interventions of individual governments, and of bilateral and multilateral agencies, are now aimed at the improvement of the quality of primary education as well as increasing educational capacities. It is now almost self-evident that greater quantity, for example the expansion of access, can only be achieved cost effectively and educationally efficiently through an emphasis on greater quality. The building blocks of qualitative interventions are well-known: curriculum development and modification; revised textbooks and educational materials; improved environments for accessibility and learning; more active teaching/learning strategies; continuous pupil assessment; and, a seamless robe of teacher professional development from initial through induction and in-service teacher education until the point of retirement from the profession.

The importance of teacher training. Several of the Case Studies alluded to the notion that the success of UPE depends on increasing the quality of teacher education, and certainly the quality of instruction for all primary school children rests firmly not just on the facilities,

school curriculum and materials, but also on the quality of teacher training, across three phases: **initial**, **induction** and **continuing in-service**, and through a diversity of modes, including cooperative school-based approaches. To be sure, where SEN children are concerned, extra, dedicated training is required for all teachers, for to model after ones own education is inadequate to teach children who have special learning needs. Moreover, the various patterns of possible integration each have their own demands in terms of revised teacher role and necessary training, as well as in the identification of teachers' aides and their necessary training. For example, the introduction of a support teacher system implies, that one teacher in school will receive a specialized level of training and all other teachers a generic training in teaching children with special educational needs. The preparation of peripatetic teachers makes slightly different demands for training and on other teachers. There are several models of good practice in the area of teacher preparation reported in the Asia region. These are described in the following paragraphs. All nations included in this study have at least a diploma level training course for specialist teachers except for Brunei and Nepal. In Brunei, teachers study abroad, typically in England and Malaysia. The Ministry of Education has recently identified more than 20 bachelor or diploma level teachers qualified in special needs education who are currently teaching in regular schools.

A report of a study in India concerning difficulties in reading and writing described an attempt to develop a model for teaching SEN children[60]. The area of learning disabilities and other topics concerned with special needs education are taught in local universities and there is a world known community of country professionals in these areas. But, the level of application at the school level needs further study. The National Council of Education Research and Training (NCERT) has set up cells both at its headquarters and in its four regional Colleges of Education for training teachers in integrated education of the disabled. The University Grants Commission has identified some universities for support for the training of teachers of the disabled.[61] In Malaysia, the Specialist Teachers Training Institute trains teachers for the education of the hearing impaired and visually impaired, as well as for those with learning difficulties. Two other colleges provide training in remedial education. A Bank loan was provided in 1989 for a needs assessment through a study visit to Australia and New Zealand, in order to upgrade professional expertise in the field of special education. Other services available include programs for parents of disabled children, early detection services, documentation services and information services for the public.

60/ Swari Trivedi & Prerana Mohite (1984), "Difficulties in Reading and Writing-A Search for a Viable Model", Child Psychiatry Quarterly, 17(3), pp.75-84.

61/ United Nations Children's Fund (1991), Children and Women in India, A Situation Analysis. New Delhi: UNICEF, p.100.

Box 22: The PIED Teacher Training Program in India

The Project Integrated Education for the Disabled (PIED) was started in 1986 to accommodate children with special educational needs in the ordinary classroom and concomitantly make education responsive to the individual needs and achievement of all children. The project has been sponsored in part by UNICEF.

PIED began in one area in each of four States and extended to four more by 1990 including two urban slum areas. The population served is around 100,000 and more than 100 schools. Concerted efforts were applied during the six week training courses to skill-train over 7,000 teachers at three levels of competencies. Emphasis was placed on curriculum and instructional modification, community awareness, peer to peer tutoring and parent training, educational psychology of special needs, classroom management, materials production, and continuous assessment and evaluation procedures.

As a result of PIED, 13,061 children with special educational needs were identified and served at a unit cost comparable to regular education ($50). In addition, 300,000 ordinary students benefitted from improved instructional quality and materials as well as from their involvement in social development.

Within the 6 nation ASEAN region, Indonesia was the among the first nations to establish a special education teacher training program and now has 6 special education teacher training colleges. There are currently 1,140 students enrolled in the two year post secondary school course. In Singapore, only existing specialist teachers are provided certificates in special education after two and one half years of training beyond the secondary school 'O' level. Those teachers with 'A' level secondary school or first degree qualifications are eligible for a Diploma in special education. A new 4 year degree course in special education began in July 1993 at the National University of Malaysia. The University of Malaya and the National University of Malaysia continue to offer postgraduate courses in special education and rehabilitation. Malaysia too has provided much of the diploma level special education teacher training to teachers in Brunei. This is seen as the commencement of regionalization and networking for professional development in the region. Thailand, in 1992 conferred 108 students with a bachelors degree in special education and 8 with a Masters degree.

The University of the Philippines offers Special Education as an area of specialization at undergraduate level and the Bachelor of Elementary Education degree includes special education. The Philippines has a well established Bachelor and Masters level special education degree program as well as in-service training in all impairment categories. Seminars, workshops and conferences are also organized at the national, regional and division level for regular teachers and special education teachers to orient them in regard to special needs children. More recently, the University of the Philippines, College of Education has proposed that all undergraduate education students should be required to take an introductory course in special education. The provision of special education in the Philippines has been almost inextricably linked to guidance and counselling, although this link is now being challenged. Manila Guidance Testing Center, a service unit of the

Division of city schools, Manila has been functioning since 1976, although in some school divisions, special education is separate from guidance and counselling. The centre is a development center for psychological tests and guidance materials, a diagnosis center for atypical children, a training center for guidance and special education personnel and a research and consultancy center. Screening and testing of exceptional children is an underdeveloped area in most developing countries, and according to the 1988 Case Study on Special Education in the Philippines, in co-operation with the Australian government, a screening device has been developed for those with learning difficulties, the visually impaired, hearing impaired and the orthopedically impaired that can be used by non-professional and professional workers. Another unique development in the Philippines is the formation of a Multi-Disciplinary Child and Adolescent Unit. This unit provides a comprehensive multi-disciplinary approach to the development problems of children particularly in the area of language disorders, motor function disorders, specific learning disabilities, behavior problems, autism and babies developmental disorders.

In Sri Lanka, the Maharagama Teacher Training College within and supported by the National Institute of Education is providing exemplary training. The special education section includes three branches: visual impairment, hearing impairment and mentally impaired. Assisted by SIDA, a broad approach has been adopted, including the training of teachers, material provision and sign language development, with a capacity for 95 teachers every two years. The curricula are child centered rather than examination centered and curricula are modified for children with visual impairment and hearing impairments.

A central aspect of responsibility for improving quality and meeting the special educational needs of students is ensuring that teachers are trained to provide specialized services. Each state would need to develop a system for training teachers and other related professions and paraprofessions (such as teachers aides) to implement the special needs educational services. The training would need to be responsive to identified requirements, qualitative and quantitative, for qualified teachers, specialists and supervisors. It was out of similar concern for teacher shortages and quality, that UNESCO developed a number of projects to encourage member organizations to develop strategies for responding to children's special needs in ordinary schools. The Teacher Education Resource Pack project, developed through the Cambridge Institute of Education, was begun in 1986 with a survey of 14 countries including India. The goal was to review teacher training in a variety of contexts, as well as teacher attitudes to integrated education for special needs. Several significant themes emerge from that work, which are beginning to spread in the Asia region, such as:

(a) the need to develop national policies for teacher education which will cover initial teacher training, induction, in-service upgrading, and continuous staff development;

(b) the importance of supervised practical experiences as a major element of teacher education programs;

(c) the importance of the "hidden population" of pupils with special needs; those children who need not have significant impairments, but nevertheless experience serious difficulty learning;

(d) the necessity to increase flexibility of curriculum practice, teaching methods, and management skills in ordinary classrooms in order to be more responsive to the needs of individual children;

(e) the importance of recognizing the value of collaboration among teachers within a school; and

(f) the need to encourage teachers to make better use of resources, such as non-professional help in the classroom (pupils, parents, people from the community and teacher aides) and professional help"[62].

Models utilizing the above insights already exist. For example, the PIED project in India has aptly applied the UNESCO Teacher Education Resource Pack with reportedly 'astounding' results in terms of pupil responsiveness to inclusive education, but also with good results in terms of teacher learning and mutual support, through the introduction of cooperative, school- and classroom-based in-service training, including partnership teaching and intervisiting[63]. In Sri Lanka, severe shortages of trained teachers and an increased emphasis on integrated and decentralized special education within the ordinary school system, led educators to conclude that there was a need to produce a teacher with a broader knowledge base in special education. It is not realistic for every school to employ specialists for children with impairments of low incidence who may rarely need such services. The training program was designed to offer teacher training in at least two specialty areas, and generic training encompassing all areas of impairment. The "master teacher" program produces highly competent teachers who are gathered into teams to conduct local two-week courses for general primary teachers in their home provinces[64]. In many countries already, teacher training institutions are combining training in special educational practices with regular education training programs. Such integrated initial training is expected to help advance the practice and principles of integration at the school level. Teachers need both initial training and continuous practice-based, in-service training to develop and renew their competence for teaching children with special educational needs. Areas of competence that initial and in-service training address include:

62/ Saleh, L. (1992), "UNESCO and Special Education: New Initiatives to Match New Thinking". In The Council for Exceptional Children, Expanding Boundaries and Perspectives in Special Education. Reston, VA: The Division of International Special Education and Services (Vol. 1, pp.4-7).

63/ See, for example, Jangira, N. K. and Ahuja, A., "Teacher Development Initiative (TDI) to Meet Special Needs in the Classroom", in UNESCO (1993), Examples of Good Practice in Special Needs Education and Community-Based Programmes. Paris.

64/ Ibid.

(a) knowledge of the developmental process and basic principles of early childhood learning;

(b) skills in recognizing the special needs of students (through such techniques as visual scanning) and developing simple assessments of learning problems;

(c) knowledge of appropriate teaching materials and teaching strategies for adapting curricula and classroom environments for children with special learning problems;

(d) knowledge of a variety of learning styles of children and skills in adapting instruction to learning, as opposed to the role of authoritarian information giver;

(e) strategies to overcome cultural inhibitions to modify the traditional directive and authoritarian teacher role;

(f) knowledge about the diversity of and continuum of needs among children of school age and skills in individualizing and grouping children for learning;

(g) understanding the practical implications, the philosophy, economic and ethical rationale for universal primary education; and

(h) skills in identifying children's need for referral to specialists.

Thus, teacher education in the Asia region is beginning to emphasize the successful learning process at the teacher level as well as at the children's level. In their training, teachers are made aware of the diversity of children and special needs of children and given basic tools to identify and respond to such needs. They acquire skills of interpersonal relations and are taught ways of cooperating with parents, community and to work in a team with other teachers. They are exposed to evaluating their teaching, children's mistakes and progress and to develop or choose varied instructional materials and motivational strategies. The new commitment is beginning with the initial training of teachers and in-service training of both regular and special school personnel. Such training appears to be most effective when these personnel are trained together and are provided opportunities to share their perspective and experiences. Perhaps most impressive of all are the beginnings of a movement to de-institutionalize the training of teachers, to recognize the value of school-based training and to appreciate that teachers can and do train themselves.

Box 23: The Improvement of Quality through Teacher Education

Policy	Practice
* Promulgation and enforcement of quality standards in teaching	* Incentives offered to attract and retain capable individuals for teaching
* Greater, more explicit accountability in system, school and classroom	* Teachers periodically re-certificated, linked to in-service training
* Development of policy for school evaluation and teacher self-appraisal	* Educational evaluation system, including teacher appraisal is based on performance indicators
* Networking of schools and colleges with each other and the community	* Teacher deployment and use of classrooms are linked and improved
* Promulgation of equal opportunities in the teaching profession, including gender and impairment dimensions	* Women, people from ethnic minorities and disabled people are recruited for teaching
* "Inclusive" teacher education prepares teachers for "inclusive" schools	* More teachers are recruited, trained and deployed in their locality
* Holistic teacher training; initial, induction and in-service, linked with curriculum & materials development	* Regular teachers in initial and in-service training are sensitized and equipped to respond to special needs
* Strong teacher training and school linkages	* Teacher education offers multi-grade and multi-disciplinary competencies
* Inclusion of "special education" survival kit in "regular" training	* Student teachers spend a larger proportion of time in linking theory and practice in classrooms
* Teacher entitlement to career-long professional development	* Teachers and teacher trainers receive periodic upgrading of skills through continuing education
* Rolling development of responsive curricula and instructional materials	* Curricula, textbooks and instructional materials are contextually relevant
* Policy for systematic and regular retraining of all teacher trainers and for their placement in school periodically for phases of teaching	* School and college work more closely together and college staff are required to reestablish periodically their credibility in professional practice
* Block and serial teaching practices in initial training in both regular and special schools	* Cooperative, school-based in-service

Case studies indicated that introducing the inclusive school would require a holistic approach where changes in management, organization and resource utilization would be congruent with changes in the curriculum, teaching/learning approaches and materials to enable a much more diversified and responsive, yet integrated, approach to a continuum of needs. The problems of curriculum, pedagogy and deployment and utilization of staff in primary schools were seen as interrelated:

(a) Monolithic concepts of human ability and the advancement of learning progress would not be appropriate. Rather what was required was a recognition of the existence of "multiple intelligences" and the essentially divergent and non-linear way in which learning takes place among primary school children;

(b) Teaching/learning approaches, texts and supplementary materials and the assessment of learning would need to take this multi-dimensionality into account;

(c) A movement was envisaged towards continuous pupil assessment and multidimensional attainment testing, where pupils may all pursue the same objectives but in different ways, perhaps even with different motivators, obtaining mastery over them at different times and different levels of achievement;

(d) Moreover, pupils could take much more responsibility than they are normally afforded for their own learning and that of their peers;

(e) Close-quarters professional support and development would be required for teachers, both institutionally and school-based, so that a team ethos may develop among them and interdependence may be fostered through the retraining of some as resource teachers to their colleagues and the acceptance of multiple role-taking in the learning of children;

(f) In turn, this would necessitate the initial and in-service training of teachers in a wider and much more differentiated range of pedagogical approaches, including group teaching and family grouping (multiple age cohort teaching) which could demonstrate "fitness of purpose" for different tasks, on different occasions and for different pupils with different needs and potentialities;

(g) Thus, the overcrowding of the curriculum of teacher education should be tackled through the pruning of often outdated and inappropriate theory and a new emphasis should be placed on the acquisition, through exemplary learning and teaching, of a broad repertoire of pedagogical strategies and techniques, including more effective whole class teaching, group and individual work, multidisciplinary and single subject project work and more effective deployment and use of generic skills like questioning, explaining, guiding, instructing and providing feedback;

(h) Given that only a very small proportion of any teaching profession is newly trained, and that most new entrants go into the profession without induction training, surrounded by role expectations, which make innovatory approaches very difficult, the potential of in-service teacher education for making a more immediate impact on teaching quality should be maximized; and

(i) Qualitative improvements in training, curriculum and materials to already existing practice in several developing countries of the region would benefit all pupils, including those currently schooled and could reduce the costs of primary education more substantially than any additional costs due to mainstreaming.

Principle 4: Strengthening the Link between Regular and Special Systems

A number of grounds for closer cooperation and coordination between special education and regular education programs were advanced in the case studies. Early intervention, screening and rehabilitation were essential to the prevention or attenuation of impairment, and this was seen as requiring closer and more coordinated relationships among responsible bodies, as was the need for continued health, nutritional and educational monitoring of all pupils. In this connection, some considered that the Decade of the Disabled (1983-92) had insufficient impact on the disabled themselves, but felt that legislation was being stimulated by United Nations resolutions and the emergence of more influential pressure groups, as the disabled began to organize themselves and parents' voices began to be heard. Educational units needed to work toward a continuum of educational placements for children; a concept of a continuum allows educators and parents to realize the possibility and expectation of movement and progression from specialized services into integrated regular settings. The continuum connects special and regular education in a system that shares all students, rather than reinforce the notion of separateness.

This belief in the need to link special and regular schools more closely, based on the concept of universal educability is implied by a relatively new term, the Regular Education Initiative (REI). REI invites the regular education system to take full responsibility for the success of all students and suggests that special education should serve as a resource for regular education[65]. The underlying principle is a sharing between regular and special education and other service sectors outside the educational system such as health and social services to ensure a holistic approach to the growth and development of children. REI implies the acceptance of universal educability and the promulgation of an ethos of success to replace the existing failure syndrome of much of primary education.

Case Studies reported that some governments may have relegated special needs education to a low priority status and that while being party to Regional statements of intent for integrated education, some Ministry of Education representatives suggest that integrated

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65/ Skrtic, T.M. (1991), "The Special Education Paradox: Equity as the Way to Excellence", Harvard Educational Review, Vol. (61)2, pp.148-206.

special education in primary schools should not be considered until 100% of all 11 to 15 year-olds has been achieved. At present less than 50% of this age group is enrolled in school in many countries. In Bangladesh, in theory there are 47 integrated programs for visually impaired children around the country. When integrating visually impaired in regular schools, the rule is no more then 10 visually impaired pupils to a school. Reportedly, whenever children with hearing impairment can be fitted with hearing aids they are integrated in the regular school system. Malaysia is in the vanguard of at least the ASEAN countries in experimenting with integrated approaches in primary education for children with special educational needs. Even without legislation favoring integration, the underpinning rationale for "**inclusive**" education is the "social responsibility" and "a shared social development", promoted by the 'Vision 2020', the economic and social blueprint for achieving the status of 'developed nation' by the year 2020 promoted by the Prime Minister, Dr. M. Mahathir. Within this frame, marginalized children are receiving increased focus within "the challenge for a caring culture[66]".

The ambitious thrust to integrated education in Malaysia is focussed on the development of the integrated program and at the same time the introduction of mainstreaming and inclusive education on a planned basis completing the overall project throughout Malaysia by 1996. In the past, there was, as in other parts of the region, a special emphasis on the integration of blind children. Children with other impairments were less likely to be integrated due to a range of associated problems including difficulties in physically accommodating the children; low expectations for all categories; cognitive deficiencies of children with learning difficulties, language and communication difficulties for children with hearing impairments and accessibility for children with severe orthopaedic or movement impairments. The main bottlenecks in this area of integrated (as well as segregated) special needs education, however, appears to be the shortage of trained teachers and accommodating classrooms and the fact, that while community models for special education, versus institutional ones, are thought to be the most economical approach, there are few models or hard evidence to demonstrate effectiveness or cost savings.

Japan has what is termed a 'Transactional Program' in which students with special educational needs are provided as much opportunity as possible to participate in educational and social activities with children in ordinary schools. In the least restrictive integrated settings the transactional program allows students with special educational needs to attend regular classes for specific subjects. For the more severely impaired children integrated social events such as field days are organized. The Philippines has evolved a variety of innovative approaches in its attempts to integrate children with special educational needs into its regular school system. In addition to fully integrated classrooms with minimal support to children who can maintain the academic pace, part-time integration has been found to be efficacious. In partially integrated alternatives, the child is assisted in the regular classroom by an itinerant specialist teacher as need arises. Another partial integration approach used in

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66/ Mathathir, M. (1991), "Malaysia: The Way Forward". Kuala Lumpur: Malaysian Business Council.

the Philippines is the co-operative class for deaf children. In this alternative, the deaf child is taught communication arts, mathematics, science and social studies in a support classroom that uses a mixture of communication methods including the multi-modal 'total communication' approach, and then joins a regular class for physical education, music arts, work education and co-curricular activities. Severely or multiple-impaired and intellectually gifted learners are similarly educated in self contained groups.

Box 24: Strengthening Links between Regular and Special Educational Systems

Traditionally Separate Institutional Systems	Integrated System to Promote Inclusion
* Educational placements separated into "regular" and "special" for "two types of children"; students seldom reintegrated in the regular class once removed	* Design of a flexible and responsive continuum of educational placements
* Regular and special education teachers provided separate in-service training reinforcing separate systems	* Joint in-service training of regular and special education teachers in inclusive education
* "Regular" initial training prepares teachers only to serve "regular" students and to refer other students	* Initial training of regular teachers includes strategies for "special" children in regular classes
* The locus of special educational services remains in the segregated special education class or school	* The locus of special educational services and support is shifted to the regular school and classes
* Educational planning for regular children and those with special needs is conducted separately	* Educational planning for children with special needs includes both regular and special educators
* Supervision of educational services to regular and special students conducted separately	* Supervision of educational services to regular and special needs students is integrated
* Special educational supports unavailable in the regular class	* Special educational support in the regular class is available to children who cannot achieve adequately
* Special educators communicate with families of special needs students; regular educators with regular students' families	* Parent and family involvement is encouraged through joint communication with families by regular and special educators
* Families are informed about special educational services available in special settings	* Families are informed about the service continuum and the philosophy of inclusive education

This approach is similar to what is termed 'the blended classroom' in North America wherein non-impaired children are integrated into classrooms designed for children with a range of special educational needs on a ratio of around 1.5 students with special educational needs to each non-impaired student. Specialist teachers are supported by regular teachers and skill-trained teacher aides and, especially in developing countries, by volunteer teachers who are sometimes upper secondary school students who desire to gain work experience. This approach is also termed 'reverse mainstreaming'. The strength of such an approach is in the peer teaching or coaching that regular students can offer to children with special educational needs. A combination of the Resource Center and blended classes approaches are under consideration as the delivery model for special needs education in Brunei[67]. Central to debates on the efficacy of integrated education is the question of regression through integration to the typical examination oriented, academic curriculum which is not well suited for individuals with impairments and other disadvantages. Few countries with a strong need to impart values and national identity through a national curriculum accept the arguments supporting alternative curricula. If primary education is to be more effective in serving a greater diversity of children, then teachers will need a larger repertoire of teaching strategies, and modifications to the curriculum and teaching styles are required in educational programs designed for all children. It was precisely this objective which the PIED project set itself.

An increasingly popular alternative service delivery system is the Special Education or Resource Center which holds clusters of classes for the variety of children with special educational needs within a regular school. The center is a school within a school. In the Philippines, during 1982-83, 23 such centers were functioning as well as 1,602 regular elementary and secondary classes.[68] Twelve special schools each serve one type of exceptional group and operate either as day or residential schools. Private ones are supervised by the Department of Education. In Sri Lanka, and for visually impaired students, there are 290 integrated educational programs managed by itinerant teachers in 20 of the 24 administrative districts and in 10 special schools (assisted by the ministry of Education) in 10 districts. For hearing impaired students there are 79 special units that exist in regular schools serviced by 98 specialist teachers spread over 17 districts; with 13 special schools in 13 districts; 3 private institutions in the city of Colombo. For students with learning difficulties, there are 38 special units in regular schools over 7 administrative districts; 5 special schools in 4 districts and private institutions provided by private agencies. In addition, 110 special units exist in regular schools for academically delayed learners in 16 districts. For physically impaired pupils, there are 3 integrated programs in ordinary schools; 2 hospital classes, 5 special schools in 4 districts. Box 25 illustrates a range of ways of more closely associating regular and special education systems.

67/ Brouillette, R. (1992), "Recommendations for the Development of Special Needs Education in Brunei". Darussalam, BSB: Ministry of Education. Policy Guideline Paper.

68/ APEID (1984), Towards Universalization of Primary Education in Asia and the Pacific, Country Studies Philippines. Bangkok: UNESCO Regional Office.

Box 25: Approaches to Closer Integration between Regular and Special Education

All case studies seemed to indicate the acceptance of a continuum of potential relationships between the formerly separate special and regular systems, so that they could learn from each other and provide resources, the one to the other, as well as to facilitate the smoother transfer of pupils between one system and the other, as need arose. For such a system to succeed, the closer involvement of parents would be needed and government systems would need to relate to and learn from the "good practice" of NGOs in this field. There can be various approaches to overcoming the dichotomy of present provision with different patterns of organization were possible, including full- or part-time attendance at the following:

(a) Two separate but interrelated systems with overlapping functions and training but in separate establishments for delivery and training;

(b) Twinning arrangements, where a special and a regular school would be closely associated, dovetail their curricula, share staff and students and undertake some joint activities;

(c) Centrally located special schools associated with a cluster of regular schools and providing assessment, withdrawal and reintegration facilities, resource and back-up expertise to the regular schools, teachers and pupils as required;

(d) Special units or resource centers (the school within a school) attached to regular schools, which arrange clusters of classes for a variety of SEN children, but where also students could have an opportunity to integrate for some of the curriculum and activities of the regular school;

(e) Special remedial classes, programs or support, sometimes on an individual basis, within the regular school with continuous opportunities for withdrawal and reintegration for all or some of the curriculum. (This requires the development of the concept of resource teacher for special needs, but not necessarily in excess of current SSRs); and

(f) Full institutional integration (the inclusive school) with additional, differentiated specialist assistance, facilities and buildings for all children, comprising curricular adaptation and differentiation at local or institutional levels and a system of support teaching within the ordinary classroom[69].

Principle 5: Commitment to a Shared Responsibility within Communities

Under the new paradigm for primary education, schools are viewed as an integral part of the community environment. Health and nutrition interventions for school children are incorporated into schools to support the educational process and to ameliorate the effects of malnutrition in the home. Teachers, head teachers, parents and the community are involved in planning and decision making, so that accountability for children's progress is shared and not placed solely on one part of the community. The support of all segments of the community is needed to produce educational outcomes. Box 26 summarizes the shift in philosophy from the more traditional paradigm of two detached educational systems to a new philosophy of shared responsibility and community involvement in educational planning. Cooperation and coordination between special education facilities, teachers and regular education schools must become the normal practice, since no one system alone can meet all

69/ Adapted from Hegarty, S. (1987), Meeting Special Needs in Ordinary Schools. London: Cassell, p.80.

children's needs. The management style in educational systems emphasizes cooperation and coordination between special and regular education to promote integration and the sharing of knowledge and resources, in order to provide a better education for a larger number of children with and without special educational needs.

An outgrowth of the normalization principle is the transfer of responsibility to the community for educating all children. The idea is expressed in African adage, "it takes a whole community to educate a child". This is the essence of shared responsibility. Over the past decade, the principle has taken hold in all parts of the world as evidenced by the spread of participatory Primary Health Care and Community-Based Rehabilitation. What was thought practical and cost-effective for developing nations has been imported by Northern policy makers. The concept of "shared responsibility" simply means that the schools alone cannot shoulder the full responsibility to provide development and educational services to children, especially those with special educational needs. Several sectors of the community must be involved and share resources and expertise. The "Regular Education Initiative", already referred to above, embodies inclusive education, where the underlying principle is a joint sharing between regular and special education and other service sectors outside the educational system such as health and social services to ensure the growth and development of children.

Box 26: Integration and Coordination: Support Systems for Children

Traditional Dual Systems:	Shared Responsibility:
* Education has two distinct systems for "two types" of children	* Unitary system but differentiated offerings
* Community is detached from the educational process	* Community involvement and shared responsibility
* Parents are excluded or detached	* Parental involvement
* Health and nutrition is not provided, or only in prior to schooling	* Health and nutritional support in school
* Segregated special education	* Cooperation and sharing between special and regular education systems

Parental and community involvement has been a major factor in development for children with special educational needs. From the development of the earliest services for blind individuals in Japan in the 8th century by a blind Chinese Buddhist priest to the Asia Pacific Decade of Disabled Persons from 1993, community efforts have led the way in providing services. The helm of community development through community participation is being gradually transferred to community members with a disability in the Asia region.

Community-Based Rehabilitation (CBR) was inspired by the World Health Organization in the late 70's as a spin-off from the Alma Ata Primary Health Care Conference. Nepal, India, Malaysia, Indonesia and the Philippines are well known for their CBR efforts. CBR uses low cost community solutions that directly involve the recipients in planning and delivering services in the community. Because individuals with mental handicaps cannot fully self-advocate and participate in the initial stages of development, parents and family members are involved in the planning and implementation of services. In Nepal as elsewhere, mothers were usually the most active family member involved in CBR. Although overstretched for time, the mothers learned that a small investment of their time to help in the independence training of their severely impaired child paid off in decreasing the larger amount of time they had spent with a dependent child.

Though not specifically mentioned in most of the Case Studies other than Nepal and Malaysia, the power of public awareness campaigns to change traditionally held negative attitudes is an important prerequisite to community involvement. Positive public attitudes towards disability have been the greatest determinant in successful community based or integrated education projects. Before any meaningful, i.e, functional, integrated education can occur, efforts need to be taken to sensitize school administrators, inspectors and school children. The PIED project in India has developed a materials production center with UNICEF assistance, from which have been produced a number of public awareness posters and brochures.

In the exchange of technological and material support for social development programs including assistance to children with SEN in developing countries, international organizations are playing an increasingly important part. The Case Studies are replete with examples of shared responsibility flowing from both west to east and east to west. The Scandinavian countries in particular have made significant contributions to Asian national efforts to train personnel and provide initial services. Examples include Norwegian Aid to teacher training facilities in Bangladesh and services development in Nepal and Swedish Aid to teacher training facilities in Sri Lanka. On a more personal level, the wife of a former Australian Ambassador to Thailand became involved in promoting Thai sign language and helped coordinate the standardization of Thai sign language. Intra-regional cooperation is exemplified by the Japanese National Institute for Special Education which has had a pronounced influence on regional development and the assistance provided by the government of Brunei to Malaysia for training Brunei teachers. The recently declared Asia and Pacific Decade of Disabled Persons (1993 - 2002) has among its Agenda for Action an increase in sharing within the region. The Asia Federation for the Mentally Retarded (AFMR) has stimulated research and innovative practices throughout the region since the late 1970s. The AFMR holds biennial conferences that rotate among each of its member nations.

Box 27: A Model of Community-Based Rehabilitation in Nepal

In the rural multi-ethnic country of Nepal, an experimental Community-Based Rehabilitation Service (CBR) was established in 1987. CBR for the disabled was first initiated jointly by UNICEF, Nepal and the Bhaktapur Jaycees in mid 1986. A CBR committee was formed by the Social Services National Coordination Council (SSNCC), now Social Welfare Council (SSC), towards the end of 1986. In 1987 Nepal Association of the Blind (NAWB) was made responsible for the integrated CBR project which worked for the CBR of the Blind, physically handicapped, and deaf as well as the mentally retarded persons. In the same year AWMR also started CBR in June 1988 in three village development areas of Kathmandu District as a pilot project with financial support from ESCAP, Bangkok. At present, NAWB, AWMR and NDA have CBR programs.

With NFPU (Norwegian Association for Mentally Retarded People) assistance to AWMR, the Parents' Association for Individuals with Mental Handicap in Nepal, specialists assisted parents, community leaders and volunteers to develop a low cost, high impact program to serve children and parents in the community. The CBR system involved the community health, welfare and education agencies as well as other community services in its attempts to prevent further delay in development and to integrate children into their communities.

During the initial year, 35 children with severe mental handicaps and often additional impairments, of whom many were under two years old and nearly all were under seven, were provided individualized and group Therapies with at least one parent or guardian present. This support group met once a week at local community centers or at AWMR's parent counselling center. The families were also visited in their homes at least every other week. Adapted Portage materials for home instruction were taught to the family member as well as domestic skills and information on health and nutrition for all family members. Volunteers were recruited to assist in training family members including grandmothers and siblings. The service was free so long as a family member was present to learn therapeutic activities. Otherwise a modest fee was charged along a sliding scale.

A toy and adaptive equipment library was established. Parents rented the materials at a very modest cost in hopes to make the project as self-supporting as possible. The number of volunteers who were provided only bus money, increased steadily. Soon the more confident parents were further trained to be trainers as they increasingly took over the project throughout the eastern part of Nepal with AWMR assistance. By 1992, 5 nearly full-time teachers, plus parents and community volunteers were serving over 120 children, nearly all under seven at a fraction of the costs of school-based instruction. There was still, however, a waiting list of over 100 children.

International non-governmental organizations similarly have played a vital role in instigating services with national counterparts. Helen Keller International (HKI) which advances the education and rehabilitation of visually impaired children and adults has established an Asia Pacific regional office in Bangkok where it is conducting regional training workshops for especially children with blindness and additional impairments. HKI has a field office in nearly all the developing Asian nations. Save the Children Fund in the UK has developed special needs educational programs in nearly all of these same nations as well as training programs and community development work. A powerful catalyst for participatory change at the community, national and international levels rests with people

with impairments themselves, who have a vested interest in equalization of opportunities. The International Non-Governmental Organization (INGO) Disabled People's International (DPI) was formed in 1981 as the international advocacy group for progress in empowering individuals with disabilities. They now have affiliate organizations of disabled people in over 100 nations including all of the countries in this Report except for Brunei, Hong Kong and Nepal. Organizations of disabled people exist in these three countries, but are not yet members of DPI. DPI has consultative status with three United Nations agencies as well as being a leading member of the International Council on Disability. It played an active role in formulating the United Nations' World Program of Action Concerning Disabled Persons. A large part of DPI's activities focus on the concerns of disabled women, disabled refugees and disabled people living in rural areas with little access to required services that could lead to independence and dignity.

Box 28: Community-Based Housing for Resettled Adolescents in Korea

Korea, like many countries in Asia (and Europe and North America) have closed down residential institutions for children and adults with learning difficulties and other severe impairments listed under Category III. The problem faced by policy makers and planners is in resettling these individuals back into their communities or in the case of Korea, to maintain assistance to SEN adolescents when they leave school. Korea has developed a system of home-like environments as part of their community response to SEN.

The Seoul City Council in 1992, engaged in a pilot project to resettle adolescents with mild to moderate learning difficulties into small group homes because, for a number of reasons, it has not been possible to find biological or foster families for these adolescents. There are now four group homes in Seoul city. For administrative purposes, the project is entitled Seoul Welfare Center for Mentally Retarded Adolescents. There are 16 residents living in each of the 4 homes. One home is for female residents. There is one "house mother" or attendant in each home.

All 16 residents are employed: two of them in "sheltered" or semi-segregated work sites. Each resident pays rent out of his/her monthly wages of approximately US$800. The homes are subsidized in part by the Seoul city at a cost of US$50,000 per home or US$3,125 per resident, the monthly rent payable being US$120. Most residents in a typical group home are fully integrated into the daily life of their neighborhood having full access to social and recreation facilities and a shared responsibility in their community.

Principle 6: Recognition by Professionals of a Wider Diversity

Educational systems in Asia are beginning to address a diversity of needs among heterogenous groups of children as they move towards inclusive UPE. Assessed individual differences are beginning to matter less in terms of the attribution of a stigma to a child, and rather more as pedagogical devices in accommodating children who have special educational needs into natural and nurturing educational settings. As educational systems move towards

what has been called an "active-modificational" approach[70], children with special educational needs are encouraged to realize their full potential, in spite of perceived limitations, rather than maintaining a passive acceptance to those perceived limitations. But, in this process, the attitudes of the school and general community towards diversity determine the degree of flexibility the system can tolerate. The school becomes the purveyor of values that embrace a wider range of individual differences. To establish these new attitudes and approaches, commitment to the principle will have to be manifest in programs of advocacy and professional development and the development of more caring communities and schools, which recognize their responsibility for the maintenance and encouragement of diversity. The benefits for school and community are legion, with the opportunity for the emergence of a greater diversity of individual and personal capacities and qualities, with consequential social and economic benefits. "Feeling comfortable with diversity" is strongly predicated on the development of more open teaching/learning approaches, new more polyvalent curricula, and a diversity of supportive and ancillary materials and greater professional expertise.

A major dimension in assisting schools and teachers to respond to diversity is strongly linked to the improvement of the quality of primary education through teaching materials linked to the initial and recurrent training of teachers. The Indian Multisite Action Research Project offers one model which includes networking of teacher training institutions, schools, NGOs and teachers (see Box 29). Teacher training is organized to respond to identified state, regional or national shortages of qualified teachers and specialists, but also to intermesh with local exigencies, such as ethnic and linguistic, cultural and religious diversity, economic and work demands of local occupations and the often different traditions associated with these. There is also a growing interest in preschool education to improve readiness for school learning, but also to generate community solidarity and early social learning, as well as to release women for occupational activity, which may be essential for the family's survival. As indicated earlier, some countries in Asia are commencing the revision of their curriculum to make it more child-centered but the implementation of this approach is not always clear, especially at the classroom level and in many countries still young primary school entrants are faced immediately with the need to function in a foreign language, to which they have had no previous access. Where there is a single system, book or scheme for teaching reading, supplementary reading books and materials for children are beginning to appear, integrated with the reading or numeracy scheme. It is thus easier for those children who have never been exposed to books and reading to develop reading and numeracy skills.

70/ Feuerstein, R. (1970), "A Dynamic Approach to the Causation, Prevention and Alleviation of Retarded Performance". In H.C. Haywood (Ed.), Social-cultural Aspects of Mental Retardation. Baltimore: University Park Press.

Box 29: A Multisite Action Research Project

The concept of "inclusive schooling was piloted in India under a multisite action research project using an Indian-adapted version of the UNESCO Teacher Education Resource Pack. It involved 33 Coordinators from 22 institutions and agencies (9 District Institutes of Education and Training, 8 Colleges of Education and University Departments, 3 schools and 2 non-governmental organizations). Two persons from each institution were selected to encourage collaboration and mutual support at the work place. They were provided training and practice in the use of the training material and helped to develop action research projects in preservice and inservice training contexts.

Action research projects for the participating institutions were planned to develop capabilities in being change agents and building up institutional capacity to encourage the use of innovative material and strategies. Concomitantly, research was also developed. The whole scheme was based on earlier experience that the implementation process, spread over a year and a half, would become a part of the institutional practice.

The action research followed pre-test/post-test single group design. Pupils and school teachers were selected randomly. The participants were asked to document the process. Data were to be reported with examples. Synthesis of data from different sources such as interviews, attitude scales. evaluation processes, photographs and audio- and video-tapes, was stressed. Movement in teacher and pupil behavior was analysed on the following measures:

1. Teacher Attitudes Towards Teaching and Learning
2. Pupil Participation in Learning Teaching Inventory
3. Classroom Drawing (Teacher and Pupils)
4. Learning Preference Questionnaire

The Project involved a total of 338 experienced teachers, 248 prospective teachers and 9,986 children in 115 schools spread over twenty three sites in different parts of the country. The attitude of teachers and pupils towards learning changed. Not only did children perceive classroom transactions as interesting, but learning achievement also improved significantly.

These sites have now become resource centers for further extension of the project into neighbouring schools. The project exemplifies networking of teacher training institutions, school clusters and individual schools, and non-governmental agencies working with teachers. The network also includes local education authorities. Scaling of the experiment to reach out to a larger number of schools through the District Institutes of Education and Training under the District Primary Education Programme is being planned. It is a first step towards institutionalisation of systemic change.

As indicated in an earlier section of this report on the importance of teacher education to the introduction of integrated schools, systematic training of teachers to address a diversity of needs among a heterogenous group of children is an important goal, if UPE is to be achieved throughout the developing world. But recognition, while necessary, is insufficient. Many teachers are trained as they were taught, and because they succeeded in learning, they implicitly assume that all children should also be able to learn. Clearly, that does not happen, and in some of the countries of this report already, teacher training institutions are combining training in special educational practices to address a greater diversity of needs and

styles of learning with regular education training programs. Such integrated initial and in-service training may be expected to help advance the practice and principles of integration at the school level, by equipping teachers with a broader array of teaching competencies and skills to motivate all children to achieve success in primary school.

But, teachers need both initial training and continuous practice-based, in-service training to develop and renew their competence for teaching a diversity of children with special educational needs. The Indian case study gives an account of a whole school, staff development initiative, which seeks to encourage teachers to adopt more flexible teaching approaches, including activity methods and cooperative group work, and help teachers to work cooperatively themselves, thus overcoming the theoretical and abstract orientation of much institution-based provision, at both initial and in-service levels. A further advance reported by the Indian case study is the concept of the multi-category resource teacher, that is someone who is trained to support other teachers across a range of physical or mental impairments or learning difficulties[71].

Such teacher education emphasizes the successful learning processes at the teacher level as well as the children's level. Teachers are made aware of the diversity of children's special needs and given a broad repertoire of instructional strategies, instructional methods and materials, and assessment methods to identify and respond to the range of those special needs. They need to acquire attitudes that promote integration and inclusion of students and promote the involvement of parents and family members in their children's education. For this, teachers have to develop skills in consultation and interpersonal relations and ways of cooperating with parents and the community and working in teams with other teachers and professionals. They need to be exposed to evaluating their own teaching performance as well as their pupils' strengths and weaknesses and progress. Box 32 summarizes the shift in practice from the traditional teacher training practices to new models of continuous renewal and improvement of professional competence to respond in particular to a diversity of children and their needs.

Box 30 summarizes the policy and practice implications of the adoption of this principle. Most strongly it emphasizes the changing professional competence needed by teachers, with a shift from traditional teacher training practices to new models of continuous renewal of competence throughout the career of the individual. Such a teacher education emphasizes the process as much as the content and recognizes the way that teacher trainers speak with their actions. Both schools and teacher education become more flexible, more interrelated with each other and more oriented to successful learning processes at the teacher level as well as the children's level. Teachers become aware of their co-responsibility for successful learning... and for failure... and how to remediate this latter. They are made aware of the diversity of children and the special needs of children and are encouraged to

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71/ See also, Jangira, N.K. (1994), Responsive Teaching. Delhi: National Publishing House; and, Jangira, N.K. and Ahuja, A. House. (1991), Effective Teacher Training: Learning Based Training. Delhi: National Publishing House.

develop a broad repertoire of instructional strategies, instructional methods and materials, together with assessment methods to identify and respond to a range of special needs of students. They acquire attitudes that promote integration and inclusion of students, and promote the involvement of parents and family members in their children's education. They develop skills in consultation and interpersonal relations and are taught ways of cooperating with parents and the community and to work in teams with other teachers. They are exposed to evaluating their own professional practice as well as their pupils' strengths and weakness and progress. They recognize their own responsibility to "keep on learning."

Box 30: Policy and Practice in the Development of Responses to Wider Diversity

Policy	Practice
* Enunciation of a commitment to the UPE Framework for Action	* Government & communities cooperate to develop action plans for inclusive UPE
* Social acceptance of disability combined with advocacy campaign to influence public opinion	* Medical model of disability is replaced social action model that accepts the right to be different
* Recognition of legitimacy of home-base culture and language	* Public awareness campaigns to change attitudes towards diversity conducted for public, educational administrators and teachers
* Recognition of concept of "least restrictive environment" and policy for promulgation and implementation	* Educational options follow the principle of least restrictive environment, as close to ordinary as possible
* "Inclusive" primary school recognized as the norm within the system	* A variety of integrated approaches available from self-contained and blended classes to full inclusion
* Social integration of those with special needs expressed in community and societal policy statements	* Instruction imparts values of acceptance of differences
* Introduction of non-discriminatory assessment, which recognize a wide variety of contributions, capacities, gifts and ways of achieving excellence	* Individual assessments are criterion referenced based on intra-individual strengths and needs & in mother tongue
* High expectations held for all members of the school community	* School expects maximum academic outcomes from all
* Flexible curriculum and examination system	* SEN children assessed through multi-dimensional procedures in consultation with parents

The aim of the UNESCO-developed Teacher Education Resource Pack, "Special Needs in the Classroom", which has been piloted in Africa and in India, is aimed at enabling teachers to feel comfortable and to cope with a wider diversity of children and their needs. Representatives from China, Hong Kong, India, Indonesia, Malaysia, Pakistan, Philippines, Sri Lanka and Thailand took part in a sub-regional workshop and seminar held in November 1991 at the National Council of Educational Research and Training, in New Delhi, where representatives of India, Indonesia and Sri Lanka reported that school integration practices are clearly advancing in their countries. China, Philippines, Malaysia and the Hong Kong representatives felt that the conditions in their countries were ripe to incorporate the "resource pack" into a national plan for teacher education to prepare teachers to teach SEN children in ordinary schools. The Pakistani representative indicated many difficulties to face to establish the principle of "Education for All, including children with Special Needs"[72]

Box 31: Accepting Wider Diversity through Physical Accessibility to Schools

Physical inaccessibility to schools has excluded thousands of children who are cognitively within the range of normal but who, for a number of reasons including polio, cerebral palsy and spinal cord injuries, cannot climb stairs or negotiate their wheelchairs through small doors. The solution is an easy one. Acceptance of wider diversity would translate into widening the doors to some classrooms and building ramps.

The government of Malaysia, with its vision 2020 for a caring society, has recently allocated made substantial allocations of finance to reduce the barriers that preclude access to selected primary schools. The fund is to be used to build simple ramps as alternatives to stairs and to widen doors into selected classrooms and toilet areas. In Bangladesh, during the costing of construction for the fully accessible National Centre for Special Education, the financial calculations for building ramps, in most situations, were very similar to the cost of stairs. Guidelines for constructing accessible schools were circulated to educational planners within the Ministry of Education.

Accessibility guidelines are part of Korea's 1981 Welfare Law for the Handicapped. Articles 2 and 8 of that law provide architectural and traffic (curb cuts) regulations. Facilities for children with impairments should be designed to accommodate wheelchairs and classrooms should be constructed in ways to deaden sound for children with hearing impairments and provide maximum lumens for children with visual impairments.

In the Philippines, the Republic Act of 1968 established a ten year training program for teachers of special and exceptional children. And a Congressional Commission on

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72/ Jangira, N.K., Ainscow, M., Ahuja, A. and Verma, J., (1992), Special Needs in the Classroom", (Draft Report of the sub-regional workshop and seminar held in India, November 1991). In Effectiveness of Resource Pack Based Teacher Training Strategies in Terms of Teacher and Pupil Attitude to learning and Class Achievement - A Multisite Collaborative Action Research Project (Report of Phase One). New Delhi: Department of Teacher Education, Special Education and Extension Service, National Council of Educational Research and Training, pp.41-45.

Education[73] states: "The gifted or talented, persons with impairments, and members of other cultural communities require modifications of the curricula, special services and physical facilities." In 1993, a Bill was introduced to replace the Special Education Unit of the Bureau of Elementary Education by a Bureau of Special Education. The Plan of Action for the Children of Sri Lanka (1991), includes in its action plans "early detection of defects and disabilities," and training of teachers to increase special education for impaired children. More specifically the objectives are to increase coverage from 1% to 10%. 3,000 teachers are to be trained and 25 district centers set up by 1995. Further actions suggested include the improvement of institutional care, provision community based rehabilitation services and diagnosis of handicaps and, integration of the slightly impaired into the regular school system[74].

Box 32: Teacher Training to Promote Continuing Strengthening and Renewal

Traditional Teacher Training:	New Models for Continuous Renewal of Competence:
* Front-end training, once-and-for-all	* Recurrent and lifelong
* Focused on a single population	* Multigrade and focused on diversity
* Content focused on "education" child	* Process focused, holistic view of child
* Theoretical and abstract	* Professional practice-based and focused on real school environments
* Lecture style and classroom-based	* Cultural and environmentally sensitive
* Single discipline-focused	* Interdisciplinary and interprofessional
* Multiprofessional	

The PIED project, described above has included efforts to in-service train teachers, emphasizing the development of awareness of the diversity of children, as well as a broad repertoire of instructional strategies, materials, and assessment methods to identify and respond to a range of special needs of students. Teachers are trained to seek to promote integration and inclusion of students and the involvement of parents and family members in their children's education. They develop skills in consultation and interpersonal relations and are taught ways of cooperating with parents and the community and to work in teams with

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73/ Philippines, Congressional Commission on Education (1991), Making Education Work (An Agenda for Reform). Manila: Congress of the Republic of the Philippines, p.11.

74/ Sri Lanka National Planning Department (1991), A Plan of Action for Children of Sri Lanka. Colombo: Ministry of Policy Planning & Implementation.

other teachers. They are exposed to evaluating their own teaching performance as well as their pupils' strengths and weakness and progress.

Principle 7: Commitment to a Holistic Approach to Educating Children

In order to avoid the fragmentation of the child, there can be no doubt that closer intersectoral initiatives, interdisciplinary interventions and interprofessional cooperation will become increasingly important. A holistic approach to the needs of the primary school child means integrating early intervention, health and nutritional supports with educational services within a developmental continuum of services for the healthy development of the child from birth, through school age and beyond. It also involves a content and approach within the primary school curriculum, which address issues of health and nutrition, not as separate subjects, but as cross-curricular themes. For this, the baseline conceptual work has hardly begun. Yet, in many developing countries included in this study, policies and actions to combat malnutrition are increasingly embracing integrated, inter-sectoral methods, linking health, education and nutrition, and community involvement in primary health care and nutrition education are seen as social necessities. Many countries accept this principle, and many realize it through the use of community health workers and targeted educational messages, often delivered through the education system. Community members may already understand, but teachers rarely do, because by and large their training does not include it, that undernourishment may be the main cause of retarded growth and underperformance at school, and that they also have a role in attacking malnutrition and providing easily understandable information on appropriate child-rearing, including suitable caring procedures for hygiene and good health[75].

The principle of the holistic and developmental approach to education is related to, but differs from, the concept of "community shared responsibility" (Principle 5). The shared responsibility refers to the relationship of the school to its community context and assumes that a broad range of community agencies and organizations need to collaborate in educating children in order to obtain quality educational outcomes. Holistic and developmental programming refers to assumptions in the design of an educational system that make it most responsive to the broad range of needs of children. Such schools are associated with increased enrollment and achievement of children in the primary grades. The holistic and developmental approach is based on the assumptions that:

(a) there are many domains of a child's life that impact upon educational performance in school;

(b) there are many aspects of the child's early development that will determine the extent to which he/she will be able to benefit from education once primary school age is reached;

75/ Yoddumnern-Attig, G., and Kanungsukkasem, U. (1992), "A People's Perspective in Nutrition Education", The World Health Forum, 12, pp.406-411.

(c) the effects of an impairment and many other life conditions can be cumulative and need to be intervened in as early as possible in the life of the child;

(d) the teacher shares responsibility with other professionals for scanning the children for evidence of actual or emerging health or nutrition problems, for referral, where available, and for taking appropriate action to overcome such problems; and

(e) the teacher recognizes a responsibility towards the whole child and its development, not just towards its cognitive achievement.

In a school system that applies developmental and holistic principles, educational services address a range of related domains that impact upon educational achievement, including health and physical status, nutritional status, emotional support and supervision, family relations, work demands, employment opportunities, family dislocation and migration, environmental conditions (and disasters), political unrest and conflicts, and stigma and discrimination based on ethnicity or impairment. In countries with adequate educational resources, early sensory stimulation and preacademic programming begins in the first year of life through the coordination of many community agencies. Appropriate remedial support continues in a developmental fashion through the primary years. Special attention and assistance are provided as the child makes the critical "transition" from family to elementary school, and from completion of primary school and entry into employment or family life. There is a range of factors that impact upon the potential and achievement of children in primary school, and a responsive educational system addresses as many of these as possible in order to achieve quality educational outcomes.

Holistic and developmental design means integrating early intervention, health and nutritional supports with educational services within a developmental continuum of services for the health and development of the child from birth through school age. In many developing countries, it is being realized that policies and actions to combat malnutrition must occur through "holistic", or integrated, inter-sectoral methods. The integration of primary health care and in-school nutrition education with basic primary education are technical and social necessities. Many developing nations accept this principle, and many realize it through the use of community health workers, including suitable caring procedures for good health[76]. Early childhood development services are viewed as a continuum of support to ensure that children are of sound body before they enter schooling to develop their minds.

When schools are viewed as an integral part of the community and the environment, home and community, health and nutrition interventions for school children are incorporated into schools as part of the education process and as tools to enable children to better learn

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76/ Yoddumnern-Attig, G. and Kanungsukkasem, U. (1992), "A People's Perspective in Nutrition Education," The World Health Forum, 12, pp.406-411.

while in school. Teachers, head teachers parents and the community are involved in planning and decision making, so that they can be held accountable for children's progress and educational outcomes. Cooperation and co-ordination is normal between "special education" facilities and teachers and regular schools, since no one system can meet by itself all children's needs. Management style emphasizes cooperation and co-ordination regarding integration as well as sharing knowledge and resources, in order to provide a better education for a larger number of children with and without special educational needs.

In many developing countries policies and actions to combat malnutrition through integrated, inter-sectoral means are extensive. Community involvement in primary health care and its nutrition education are technical and social necessities[77]. One example of an inter-sectoral project to improve child development services to combat health and nutritional problems, is provided by the three-year project (1990-1992) supported by UNICEF and the Christian Children's Fund in Thailand. This project is an inter-sectoral program of the Thai Ministries of Public Health and Interior and the Institute for Population and Social Research at Mahidol University. The main objective of the inter-sectoral project is to develop a procedure to provide age-appropriate care and education for rural children through an integrated nutrition, health and educational services program, carefully designed to match the community's life style. The project entails three phases: (1) research; (2) intervention development and implementation; and (3) evaluation. A total of 800 homes were included and interviews were held with mothers of malnourished children 0-6, and mothers of normally developing children of the same age group. Interviews were also held with village health workers, midwives, and knowledgeable community members to understand existing community attitudes, perceptions and knowledge about malnutrition in the home and community.

The development of healthy children is the "shared responsibility" of the family and other segments of the community, including non-governmental agencies. Early childhood development services must be viewed as a continuum of supports to ensure that children are of sound body before they enter schooling to develop their minds. Community agencies must work together. Such community agencies may include public health clinics and services, nutritional services, food distribution centers, private non-profit and volunteer agencies that offer aid and support, child protective services, social service agencies, and disaster relief agency supports. In sum, although there is considerable consensus building about the essential elements of reform, there is growing debate about specific issues of policy, definitions and categorization of children with special needs, teaching/learning methods, and curriculum and management.

The holistic approach occurs within a developmental continuum of services for the whole development of the child from birth through school ages. In many of the 15 countries included in this study, it is realized that policies and actions to combat malnutrition and

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77/ Ibid.

social and environmental disruption to education must occur through integrated, inter-sectoral methods. Country Case Studies and experience indicate that quite often the coordination and mobilization of the various components of holistic child development are initiated by agencies directly concerned with marginalized children. These organizations include National Social Welfare Coordinating Committees and National Councils for (or of) Disabled People. Community involvement in primary health care and nutrition education are technical and social necessities, sometimes realized through the use of community health workers and teachers. But teachers and community members may not see that undernourishment may have been the main cause of retarded physical and cognitive growth, and that there is a need for understandable information on proper child-rearing, including suitable caring procedures for good health[78].

The development of healthy children who are enrolled in schools is the "shared responsibility" of the family and other segments of the community, including non-governmental agencies. A few of the national Case Studies provide good evidence of holistic approaches in the area of special needs education and child development. The newly constituted Special Education Council (SEC) in Nepal includes representatives from the Ministries of health, welfare, community development and labor as well as education. They collaborate with specialists to find cross-sectoral solutions to whole child development. Most Malaysian NGOs take a similar approach in the development of related divisions that can provide continuous support of children from identification of aberrant development in infants, to preschool services through adult training schemes. The Malaysian Case Study suggests that the role of NGOs while significant is sometimes duplicative and uncoordinated. To assist in the coordination functions the government formed in 1991 the National Advisory Council on Children with Special Needs.

The whole school approach implemented in India and to some extent in Indonesia is another example of networking and creative use of all available resources. At a small school in an urban slum area the whole school approach has utilized the UNESCO-inspired Teachers Resource Pack to sensitize and provide training to teachers who have had scant exposure to children who generally are out of school for social and physical reasons. The project serves 640 pupils from diverse poverty settings. The children participate in nearly all aspects of the school including setting the learning activities and self-assessment. The teachers periodically team-teach in classrooms for children with problems. The headteacher covers the team teacher's class during these sessions. The whole school approach makes valuable use of all personnel including the bus drivers and cleaning dobis in teaching the broad-based relevant curriculum. The Case Study reports that the academic standard and the morale among staff and students is as high as one would find anywhere.

78/ Yoddumnern-Attig, G., and Kanungsukkasem, U. (1992), op. cit., pp.406-411.

Box 33: A Holistic and Developmental Approach to Educating Children

Traditional Approach to Educational Programming	Developmental and Holistic Educational Programming
* Educational services are focused on the academic and basic skill needs of children	* Educational services viewed holistically, with the assumption that many domains of a child's life impact upon educational performance
* Educational programming ignores related domains impacting upon achievement, eg, health, physical and nutritional status, family relations	* Educational programming addresses factors impacting upon educational achievement, including health, physical and nutritional status, emotional support and family relations, work demands, employment opportunities, environmental conditions (and disasters), political conditions and conflicts, and stigma of ethnicity or impairment
* The educational system accepts at "face value" children's level of performance and potential at initial enrollment, and may not assess other factors that interact with performance, which if ameliorated, could accelerate achievement	* Educational programming recognizes the effects of impairment and other life conditions in early development
* Educational programming begins with the first primary grade and preschool opportunities are either limited or unavailable	* Educational programming includes sensory stimulation and preacademic activities to induct children into school
* Special supports are not provided during critical transitions in the early development of the child, eg, from family to primary school	* Particular support is provided as the child makes the transition from family to elementary school
* Teachers are trained in formal primary methods, and receive little preparation in early developmental processes	* Teachers understand developmental milestones for children in early childhood and preschool years and their impact upon primary educational achievement

There is increasing recognition of the interrelationship of health, education and nutrition, although strategies to address this complex are still in the making. The World Bank, for example, highlights the need for closer scrutiny of and attention to the nutrition and health problems of school-aged children, in addition to the traditional concern with those at the pre-school level[79]. Succeeding paragraphs briefly explore three issues in a holistic approach to the provision of primary education for all: (1) the link between health and nutrition and learning, (2) the impact of health and nutritional factors upon readiness for

79/ World Bank (1993), World Development Report, 1993 (Investing in Health). New York/Washington DC: The World Bank/Oxford University Press.

learning and school performance, and (3) estimates of the numbers of children with nutritional deficits in Asia Region countries[80].

Box 34: Home-Based Resource Teaching Services

Home-based resource teaching provides services to mostly Category III children who are more difficult to accommodate in the ordinary or even special classrooms. In Japan, the itinerant or home-based program offers therapeutic instruction to children in their homes or other facilities in the presence of a family member who continues the therapies demonstrated by the itinerant teachers. Portage is one home-based approach used in nearly all the Asian countries. Japan has modified the Portage system of instructional procedures and developmental curriculum (or checklist) for use in day centers with family members present or in the home. The effectiveness of the Japanese Portage model was put to test by Yamaguchi (1988; 1991). Preschool age children with Down syndrome who were placed on the Portage program had a substantial gain in development quotient. Moreover, when the experimental group reached primary school they maintained their gains in measured intelligence.

Home visitation schemes are supplemented by a 'transactional program' wherein children who are excluded from schools participate in educational and social events in ordinary schools for the purpose of socialization. Transactional events include field trips and club activities and when possible preacademic or academic activities.

In Hong Kong a similar service is offered as a temporary measure to meet the special educational needs of hundreds of children on waiting lists for special school attendance. Visiting teachers conduct home visits once a week to guide parents to support the teaching strategies they prescribe. The teacher-student ratio in this program is 1.5 teachers for each eight to twenty pupils, depending on the degree of impairment. The service additionally offers opportunities for the home-based children to attend school-based programs and social activities. There are regular meetings between family members and teachers to discuss common problems and to share found solutions. A team of inspectors and heads of special schools has been established to monitor the problems associated with the Home-based Resource Teaching Service.

There are three ways in which health and nutrition risk factors interact with educational interventions to affect the individual child's ability to benefit from education (and ultimately the overall effectiveness of the educational system for children in developing countries):

(a) They act as **precursors** or determinants of the capacities or aptitudes of infants and very young children. Any such deficit could result in delayed entry, failure in or exclusion from school;

(b) They interact **cumulatively** with, or separately from, the precursors as later determinants of the educational success and scholastic tenacity of the young child as he or she enters primary education; and,

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80/ We are grateful to Mr James A Greene, Principal Nutrition Specialist, ASTHR, for his comments and suggestions on the following of this report.

(c) They act to establish long-lasting patterns and values in children and can influence the educational experience and, in turn, act as **partial determinants** of the conditions for the next generation.

A summary of the relationship between health and nutritional conditions and learning gathered from related literature suggests:

(a) There are fairly strong indications of a relationship between protein energy malnutrition and cognitive development, which may appear even before anthropometric deficits emerge;

(b) In populations where malnutrition is endemic, children with a history of severe protein energy malnutrition tend to enroll late in school and drop-out early;

(c) Although the cost is high and the process complex, impairments caused by protein energy malnutrition can be mediated by educational, social and physiological provision following nutritional rehabilitation;

(d) Iodine deficiency in young children is an important risk factor for school achievement, being associated with reduced intelligence, visual-perceptual organization, visual-motor and psycho-motor coordination. Iodine deficiency in pregnancy can cause hearing and visual perception deficits in the newborn;

(e) Maternal iodine deficiency can lead to irreversible mental retardation, cretinism, deaf-mutism or permanently impaired hearing in young children. Severe and chronic iodine deficiency disorders can result in cretinism (severe stunting of growth and other developmental delays) which is also accompanied by degrees of learning difficulties;

(f) There is a strong relationship between iron deficiency anaemia and primary school performance;

(g) Chronic vitamin A deficiency can lead to low vision or blindness. It is estimated that it blinds half a million pre-school children each year and in 1991 nearly 14 million children suffered eye damage due to vitamin A deficiency[81]. Such damage represents both a personal tragedy and a social and economic burden. It has implications for the kind of educational provisional available; and

(h) Parasite infections can have significant impact and child nutrition and health during primary school. The physical effects of whipworm, roundworm and hookworm appear to significantly correlate with both cognitive development and

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81/ World Health Organization (1992), National Strategies for Overcoming Micronutrient Malnutrition. Geneva: WHO, (45th World Health Assembly, Doc A45/17).

educational achievement. Such infections are contributing causes of protein energy malnutrition and iron deficiency anemia, which have adverse effects on energy levels and school aptitude. They can cause biochemical and immune system changes with clinical symptoms that appear to affect school learning and school attendance.

Box 36 seeks to show the strength of relation between malnutrition and learning factors and Box 37 shows the situation on the ground, indicating that childhood malnutrition in Asia is endemic to the extent that the ideal of achieving UPE is surely interdependent with altering nutritional habits and redistributing resources. In South Asia, which has the highest prevalence of underweight young children in the world, estimates of underweight preschool children are available from Pakistan, Sri lanka and Bangladesh. Currently, the prevalence rate hovers at about 60%, after a decline in the 1980s[82]. The average rate of chronic malnutrition in the school age population in selected nations in Asia is around 42% with Bangladesh topping the list with 71%. The average rate for iodine deficiency is 58% with China registering an average of 74%. Iodine deficiency averages 49% with Nepal and India recording averages of around 74%[83]. In general, an inferential relationship can be perceived between girl child malnutrition and illness in Asia and generally lower rates of female school enrollment and years of schooling.

Some nutritional deficiencies are **alterable (remediable)**, either by educational, social, nutrition or health interventions, or by some combination of all of these. For example, although blindness that results from vitamin A deficiency cannot be reversed in a school-aged child, stunted physical growth from early malnutrition can be partially compensated for after the child begins school[84]. Inattention and lack of concentration due to iron deficiency can be corrected with iron supplementation or reinforcement. Cumulative deficits from chronic iron deficiency anaemia which have produced changes in the biochemistry of the brain, however, will require more protracted educational interventions and in some cases physical rehabilitation. Some vision and hearing impairments caused by malnutrition can be partially reversed with appropriate nutritional supplementation and educational remediation or reinforcement.

Some **alterable** impairments are partially **reversible** with the engagement of substantial resources. Others impairments are **alterable** with the investment of little cost. Some impairments and conditions in the child's environment will greatly affect the child's ability to

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82/ United Nations (1992), Second Report of the World Nutrition Situation. New York: UN Administrative Committee on Coordination, Subcommittee on Nutrition, p.24.

83/ Lockheed, M., Verspoor, A. and Associates (1991), Improving Primary Education in Developing Countries. Oxford: Oxford University Press for the World Bank.

84/ McGuire, J.S. and Austin, J.E. (1987), Beyond Survival: Children Growth for National Development. Geneva: UNICEF, p.6.

learn in school. Other factors will play only a minor role in educational achievement and the perseverance of the child, no matter how much is invested in their remediation. For example, a physical impairment such as a facial birthmark, a lip malformation or a cleft palate may be altered with surgery, but even where they are not, they may not substantially and directly affect the child's educational achievement, except, perhaps, in the latter case, in the area of speech and increasing the pupil's self concept. In contrast, chronic conditions such as malnutrition and neglected health conditions can greatly affect the child's cognitive ability and impair learning.

Box 35: The Comprehensive Observation and Screening Scheme in Hong Kong

The identification of special educational needs at the earliest stage of a child's development is an integral component of special needs education in Hong Kong. The Health Department has developed a Comprehensive Observation Scheme that provides infant and early childhood screening at 45 Maternal and Child Health Centers. The Scheme employs specialized nurses to conduct developmental screening at ages 10 weeks, 9 months and 3 years. When a child with aberrant development or an impairment is identified the child is referred to specialists who provide clinical diagnoses and prescribe appropriate remedial interventions.

Between 1986 and 1988, nearly 600,000 children were screened. Of these children, 3.6% or 12,379 infants and young children were referred to specialists. Most common among difficulties identified were speech, language and hearing problems followed by minor physical abnormalities and then degrees of learning difficulties.

As follow-on to the under five year old screening program, the Special Education Service Centers within the Education Department has established a Combined Screening Program that screens all children in primary 1 (six year old students). The purpose of the Combined Screening Program is to identify and refer for full assessment any child who has a moderate to severe impairment or other difficulties. The screening includes tests for vision and hearing acuity, and for speech and learning difficulties.

In the period 1989-90, 5 to 7% of the 86,578 children screened were identified as requiring further assessment or follow-up services. A spin-off of the screening procedure is the involvement of classroom teachers to further identify difficulties within their classrooms. For this purpose, a Teacher's Observation Checklist has been developed. In addition, specialized seminars are conducted to inform teachers on procedures for identifying, remediating and referring children with difficulties.

Studies in China, Nepal, India, Thailand and the Philippines have shown that in populations where malnutrition is endemic, children with a history of severe protein energy malnutrition (PEM) enroll late in school, drop out early, and manifest school aptitude deficits. Children with a history of chronic mild-to-moderate malnutrition, as reflected in stunting, will on average show poor attention in the classroom and have lower achievement test scores than their well nourished peers reared in the same type of environment[85]. A

85/ Ibid., p.6.

recent study, concerned with nutrition and health predictors of school failure in Jamaican children, concluded that failing children had lower height-for-age, weight-for-height and hemoglobin levels[86].

Box 36: Association among Nutritional and Health Conditions and Learning[87]

	Aptitude (1)	Memory	Length of Enrollment	School Achievement	Sensory Impairments
PEM *	+++ (2)		++ (3)	++ (2)	
IDA **	++	?	+	++	++
IDD ***	+++	++	+++	+++ (4)	++ (5)
Vitamin A			++	?	+++ (6)
Parasites ****	+++		++ (7)	+	
Hunger	++	+	+	+	+

\+ Strength of association
* Protein Energy Malnutrition (PEM)
** Iron Deficiency Anemia (IDA)
*** Iodine Deficiency Disorders (IDD)
**** As contributing causes of iron deficiency anemia

1. Aptitude as measured by tests of attention and concentration.
2. The handicap caused by PEM can be minimized by educational, social and physiological provision after nutritional rehabilitation.
3. In population where malnutrition is endemic children with a history of severe PEM enroll late in school and drop-out early.
4. Mild iodine deficiency disorder; cretinism causes severe mental retardation.
5. Iodine deficiency in pregnancy causes hearing impairment and visual perception deficits.
6. Total blindness and different degrees of visual impairment.
7. Parasite infections are contributing causes of PEM and iron deficiency anemia, which have adverse effects on school aptitude. They might also cause biochemical and immunological changes with clinical symptoms that are suggested to effect school learning as well as increase absenteeism.

The number of children who come to school with undiagnosed hearing impairments or visual impairments related to severe vitamin A deficiency is not precisely known. A study in the Philippines revealed that 6-7% of children tested had some degree of visual impairment.

86/ Reported in the World Bank PHR, (1992), New and Noteworthy in Nutrition, (No. 16). Washington, DC: World Bank, p.3.

87/ Derived from Pollitt, E., (1990), Malnutrition and Infection in the Classroom. Paris, UNESCO, and from Levin, M., Pollitt, E., Galloway, R., and McGuire J. (1991), Micronutrient Deficiency Disorders. Health Sector Priorities Review. Washington DC: World Bank.

This study also found the highest proportion of children with poor vision in the first grade[88]. The percentage of children with impaired vision decreased as grade level rose. This may suggest, say the authors, that children with poor sight may experience a higher rate of failure than children with good sight. The study concluded that mental ability and visual ability were the strongest predictors of academic achievement for the sample studies[89]. It seems reasonable to assume that many of these children dropped out of school as a result of the school's failure to meet their special needs.

There are several adverse affects of **Iron Deficiency Anemia** on learning. The number of school-age children (5-12 years) with iron deficiency anemia has been estimated to be 22% in East Asia and 50% in South Asia, totalling approximately 144.8 million children (excluding China)[90]. Children with anemia have often been described as "backward" or apathetic because their level of alertness is lowered[91]. Though the reduced alertness is caused by the dietary deficiencies, teachers normally may not recognize the connection. A study in Indonesia[92] suggests that the locus of the effect is not restricted to the reception of information but also involves higher-order cognitive processes"[93]. These were reversed after dietary iron therapy.

Large numbers of children with iron deficiency are enrolled in schools. To ensure that they remain in school, it is of paramount importance that educational interventions in the regular classroom be combined with continuing efforts to improve health and nutrition. It is also equally important that health and nutritional interventions be instituted in infancy and preschool years to provide the child the best constitutional "head start" once he or she enters formal schooling. The effects of **Iodine Deficiency Anemia** on learning are equally as devastating. In geographic areas where iodine deficiency is endemic, children who are otherwise normal have, on the average, fewer years of schooling than children of similar ethnic and cultural background living in non-endemic areas.

88/ Florencio, C. (1988), "Nutrition Health and Other Determinants of Academic Achievement and School Related Behavior of Grades One to Six Pupils" quoted in Lockheed, M., Verspoor, A. and Associates (1991), Improving Primary Education in Developing Countries. New York: Oxford University Press for the World Bank, p.80.

89/ Ibid., p.80.

90/ Levin, H., Pollitt, E., Galloway, R. and Mcguire, J. (1991), Micronutrient Deficiency Disorders. (Health Sector Priorities Review). Washington, DC: World Bank.

91/ Scrimshaw, N.S. (1991), "Iron Deficiency", Journal of Scientific American, October, pp.46-52.

92/ Soewondo, S., Husaini, M., and Pollitt, E., (1989), "Effects of Iron Deficiency on Attention and Learning Processes in PreSchool Children: Bandung, Indonesia", The American Journal of Clinical Nutrition, 50, 3, pp. 667-673.

93/ Ibid., p.673.

Box 37: School Age Children Exhibiting Nutritional Deficiencies (%)[94]

COUNTRY	CHRONIC MALNUTRITION	IRON DEFICIENCY	IODINE DEFICIENCY
Bangladesh	71.0	74.0	--
Bhutan	--	--	47.0
China	5.0	86.9	--
India	48.4	69.4	55.0
Indonesia	69.9	--	72.5
Korea (Republic of)	18.1	--	--
Malaysia	57.2	--	--
Myanmar	--	--	70.0
Nepal	67.0	--	74.0
Pakistan	80.0[95]	--	--
Philippines	42.7	47.2	36.1
Sri Lanka	--	--	12.0
Thailand	8.0	11.4	23.5

Even children without signs of cretinism may have neurodevelopmental deficits which place them at an educational disadvantage[96]. Though most of these children do enroll in the regular school system, the drop-out rate is thought to be high. Although generalizations about health and nutritional problems throughout Asia are difficult to sustain due to the disparate variations among nations and within some nations where inequities between urban and rural areas exist, recent studies indicate a strong relationship between

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94/ Lockheed, M., Verspoor, A., and Associates, (1991), Improving Primary Education in Developing Countries. Oxford: Oxford University Press for the World Bank.

95/ Sindh, (1987), "Study for the Formulation of a School Feeding Programme. Report to Norwegian Agency for Development, The Aga Khan University, December 1987, as reported in Kardar (1993) Pakistan Case Study.

96/ At a recent meeting in the Bank (February 1992), it was reported that children in Chinese villages without an iodine program had 15 IQ points lower than children in those villages with adequate iodine. Reported in World Bank (1992), New & Noteworthy in Nutrition, (No. 16), p.9.

poor health and nutrition and children's learning ability, actual achievement, and the overall efficiency of the education system[97].

The argument is often advanced that in developing countries, poor health and nutrition are the major cause of impairments. Many children suffering poor health and nutritional conditions come from poor families and from remote and disadvantaged sections of the country, which are often discriminated against for social, linguistic or ethnic reasons. These children, who are at the greatest risk of becoming impaired, are also the ones who can benefit most from education. Education for them is a primary tool for preventing and reducing the long-term impact of impairments and to help them acquire basic literacy as well as health and nutrition education. Most probably, primary education will be their only education. Thus, it is the schools' basic responsibility to provide these children with an opportunity to enroll and remain in school despite the poor conditions in which they might live. If teaching and learning are the goals of education, then all of the variables that impact upon their learning (nutritional, health, emotional, physical, perceptual, and developmental) must be appropriately identified and addressed by the educational system, working in coordination with other sectors, to maximize educational investments to address the whole child.

97/ United Nations Children's Fund (1990), Children and Women in India: A Situation Analysis 1990. New Delhi: UNESCO, p.41.

THE PARADIGM SHIFT IN ASIA

Gathering information required to determine the extent to which Asian nations are approaching "inclusive" UPE and what paradigm is emerging in the process has been the primary objective of this study. On the basis of the evidence presented in this report, progress is being made in the Asia region towards a major paradigm shift in primary schooling, which will include the majority of children with special educational needs. Countries in the Asia region are increasingly aware that the goal of UPE will require increasing the participation of groups of children who have remained marginal in the educational system and also making provision for various special population groups. Most of these countries have already begun to address the goals of qualitative improvement in primary schooling, which the participation of these children will imply. Even where there is still a need to improve access to primary education, countries are also concurrently planning and implementing programs for improving the quality of that schooling. All Asian countries covered by this report are increasing provision of primary education for children with special needs both in special schools and through various forms of integration within regular schools, even though these developments are only in their early stages, and as yet most remain unevaluated.

Looked at regionally, the operationalization of the seven principles, introduced at the beginning of this report is very uneven. The 'new movement' in primary schooling in the Asia region arising from the shifting paradigm of education for children with special educational needs, has, however, begun to address the need to operationalize the seven principles, not just to declare them as goals. Countries pursuing an inclusive policy of primary education have commenced the process of enunciating the following overall operational goals which are highlighted for each principle as follows:

(a) recognition within legislation and policy of the inherent right of all children to education, at least at the basic and primary level **and the establishment of the managerial, operational and instructional principles and practice to achieve that goal**;

(b) recognition of the centrality of the child in the educational process **and the adaptation of the system and the teacher to focus educational interventions on the child's culture and other prerequisites for learning and successful schooling**;

(c) prescribing the enhancement of quality as a primary goal of school reform, relating quality improvements to a more inclusive and flexible definition of children's special learning needs **and the mandates and resource changes necessary for that goal in such areas as curriculum and textbooks, to make primary education more effective and relevant to the lives and futures of a wider diversity of children**;

(d) encouraging the strengthening of links between the regular and special educational systems to achieve a seamless continuum of service delivery **and the provision of the appropriately trained personnel, structures, procedures, managerial structures and the institutional incentives to achieve that goal**;

(e) advocating and encouraging a shared responsibility for the healthy development and education of all children within communities in an integrated way **and the provision of the resources and administrative structures to empower communities to identify and respond to their own problems and to "own" their own services**;

(f) enabling the school and the teacher to recognize and respond to a wider diversity of learning needs **and the provision of improved management and more supportive and continuous professional development for teachers and administrators**;

(g) interrelating more closely issues of health and nutrition of children and their education into what might be termed a more holistic, development and less sectorally partial view of the child **and the provision of the policy framework, incentives, channels and resources to achieve the goal**.

In this ambitious undertaking, the report highlights conceptual, resource, personnel and manageability problems for schools and teachers in introducing new methods and approaches, implicit in the concept of "inclusive" schools, although the response proposed is not to increase the size of the coat, but to cut the cloth differently, improving design and application. Thus, the major concern that initiatives to include the majority of children with special educational needs in regular primary schools would unnecessarily inflate unit costs for the poorest countries, where in some cases expenditure per primary student may be declining, has to be addressed, not through additional funding, but through increased efficiency and the improvement of training, design and quality. Additional staffing except pro rata on the basis of existing SSRs is unlikely to be available in most countries, and greater internal efficiency has to be sought through the retraining of existing teachers and headteachers, more appropriate initial and induction training of new teachers, improved deployment, motivation and professional support of existing staff, better and more appropriate learning materials and curriculum reform to make the content and pedagogy appropriate to the lives, capacities and needs of a wider range of children. Schools need to be provided with the full range of human resources necessary to deliver a full curriculum for all children, through a combination of class-teacher, specialist, semi-specialist, resource teacher consultancy and ancillary staff, as necessary, but that need not mean more staff overall than at present. It is, thus, rather a question of improved and more differentiated quality than greater quantity.

For these reasons, the introduction of inclusive schools will need to be coordinated and incremental, phased and subject to a rolling review, rather than institutionally piecemeal.

This necessity raises the issues of how schools and teachers assess, evaluate and improve their own professional practice, how the effectiveness of a primary school is to be judged and rewarded and how a system of primary education for all can best be introduced and its effectiveness formatively evaluated. This summary report has collated and analyzed against seven principles for UPE the returns from case studies, and combined this material with information from field visits and documentary study. It has sought to draw a panorama of the various ways in which nations of differing economic status are responding to the new paradigm for the normalization of service delivery and the new ways in which the needs of children are being more closely perceived and responded to. The report has, thus, collected information about new developments rather than undertaking experimental, empirical or action research into the effectiveness and appropriateness of those developments. For this reason, the report should be seen as an initial and exploratory reconnaissance of the territory, rather a full-scale and definitive mapping of the terrain. Further more detailed ethnographic and statistical work is needed especially at the micro level to appraise current developments, to identify those developments which are most cost effective and educationally efficient, and to draw up operational guidelines for the implementation of best practice at a cost which is affordable to even the poorest countries. This next phase of closely evaluated development is now urgent, precisely because so many countries at all levels of economic development are beginning and planning the introduction of inclusive primary schools, even those where in a quantitative sense, UPE has already been achieved.

For all countries covered by this report, there appears to be a recognition that the education of the three groups of children with special educational needs covered by this report has to be responded to if inclusive UPE is to be achieved. Many issues remain unresolved, as they do in western Europe and America. Most notable of these is the question of educational efficacy and cost-benefit of fully integrated education. When enrollment ratios in some countries are less than 70%, is increased attention to children with special educational needs efficient policy? These nations have considered evidence concerning the affordability, human capital improvement and potential and cost effectiveness arguments for such provision, as well as advocacy based on humanitarian and utilitarian arguments. The answer offered by the Asian nations covered by this report is yes.

The Major Messages of the Report

While it is not possible in a brief summary to do full justice to the range of current developments identified in this report and their implications for policy and practice, nonetheless, a number of major "messages" may be summarized as follows:

(a) UPE cannot be achieved without the inclusion of children with special educational needs, either in regular schools or, vastly more expensively, in segregated settings;

(b) There is a range of alternative institutional and pedagogical methods of integrating the vast majority of children with special educational needs into

regular primary schools, many of which are currently being introduced in the countries covered by this report;

(c) Children with special educational needs includes all children with situational disadvantages or physical, mental or emotional impairments, as well as those who experience difficulties in learning at any time during their school age;

(d) There are personal, social and economic dividends to educating primary aged children with special educational needs, wherever possible in mainstream schools;

(e) The vast majority of children with special educational needs can be cost effectively accommodated in regular primary schools at only marginal increases in unit costs;

(f) Of the various alternative models for the inclusion of the majority of children with special educational needs in mainstream schools, the support teacher system promises to be the most cost effective and educational productive;

(g) The cost of integrated educational provision for the vast majority of children with special educational needs is substantially less than providing for them in segregated settings;

(h) Changes towards more inclusive primary education may already be perceived in policy and practice in all the Asian countries at all levels of economic development covered by this report;

(i) The costs of continuing family, community and social dependence are likely to be far greater than the investments necessary to educate such children;

(j) To achieve "inclusive" UPE, major changes will be needed in the way in which primary schooling, its organization and pedagogy, are planned, implemented and evaluated;

(k) Preparation for teaching (and headteaching) in "inclusive primary schools" requires reforms of much current initial, induction and in-service teacher education, their style, mode, location, process and content, and the recognition of a range of teaching roles, including specialist, class teacher, resource teacher and teachers aide;

(l) A combined health, nutrition and educational strategy is desirable, if all children are to benefit fully from primary education;

(m) Intersectoral and interprofessional initiatives are necessary for the successful delivery of primary education for all;

(n) Community involvement is essential to the development of "inclusive primary education"; and

(o) Given the plethora of developments towards inclusive schooling in the Asia region and the rapidity of their increase, there is an urgent need for more research and evaluation of emerging provision to identify those patterns which are most cost effective and educationally efficient.

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GLOSSARY

Adaptive Behavior: Effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his age and cultural group. Levels of adaptive behavior are defined by standardized behavioral assessment tools such as the Adaptive Behavior Scales of the American Association on Deficiency, the Balthazar Scales of Adaptive Behavior, and others.

Basic Right to Education: The principle or belief that all children, regardless of socio-economic, physical mental or other disadvantage or disability, possess an inalienable basic right to education at public expense if the family is unable to afford the expense and to equal opportunity for a quality education.

Block Teaching Practice: A period of intensive, continuous observation and practice teaching, usually under the supervision of an experienced teacher and a peripatetic member of staff of a teachers college, lasting several weeks or, in some cases, months, during which the student teacher takes increasing responsibility for teaching a particular subject or subjects to a particular class or classes.

Case Management/Service Coordination: Activities aimed at linking the service system to an individual or consumer and coordinating the various system components in order to achieve a successful outcome (Joint Commission on Accreditation of Hospitals, and the Accreditation Council for Services to Mentally Retarded and Developmentally Disabled.

Case Management Services: According to the Developmental Disabilities Act of 1984 (PL 98-527, U.S.): Such services to persons with developmental disabilities as will assist them in gaining access to needed social, medical, educational and other services, including follow-along services which ensure, through a continuing relationship, lifelong if necessary, between immediate relatives or guardian, that the changing needs of the person and the family are recognized and appropriately met; and coordination services which provide support, access to and coordination of the services, information on programs and services, and monitoring of the person's progress (DD Act, Part A, Sec. 202. 1983).

Class Teacher System: Deployment of teachers in primary schools so that one teacher has the exclusive or predominant responsibility for all subject matter to be learned by the children in one class. (See Specialist Teacher System)

Cognitive Deficit: An inadequate or subaverage intellectual performance or functioning.

Cohort Group: Group or groups of individuals chosen for a research study on a selected criterion, e.g., date of birth. Often noted in longitudinal studies.

Community-Based Services: Services to disabled individuals which embody the principle of normalization, making available to all disabled persons, patterns of life and conditions of everyday living, as close as possible to the regular circumstances and ways of society. Community-based services are non-institutional, and allow for the accommodation and habilitation of individuals in small-scale community homes with services in integrated community settings.

Construct: A psychological characteristic (e.g., numerical ability, spatial ability, introversion, anxiety) considered to vary or differ across individuals. A construct (sometimes called a latent variable) is not directly observable; rather, it is a theoretical concept derived from research and other experience that has been constructed to explain observable behavior patterns. When test scores are interpreted by using a construct, the scores are placed in a conceptual framework.

Correlation: The tendency for two measures, such as height and weight, to vary together or be related for individuals in a group. If, as with height and weight, people who are high on one measure or variable tend to be high on the other, the correlation is said to be positive. Correlation does not imply causation but only concomitance.

Cretinism: A congenital condition of stunted physical and mental development characterized by thyroid deficiency, appearing early in childhood and capable of amelioration if treated with thyroid extract at a sufficiently early stag of development.

Cultural-Familial Retardation: A term occasionally used to indicate a condition of unknown etiology presumably associated with family history of borderline intelligence or mild retardation and home environment that is either depriving or inconsistent with the general culture.

Deinstitutionalization: A term used to describe movement of substantial numbers of residents of large state residential facilities to either smaller state facilities or group homes located in urban, semi-urban or rural settings.

Deprivation, Environmental: Insufficient quality, variability, or discriminability of stimulation in the environment. Two types of deprivation include:

> **Cultural Deprivation:** A condition in which the general total environment of a child is markedly inappropriate for teaching skills needed for coping with the general environment, even though appropriate for the subculture.
>
> **Maternal Deprivation:** A condition in which the infant receives insufficient, inconsistent, or inappropriate stimulation or care.

Developmental Disabilities: Severe, chronic disabilities of a person which are attributable to a mental or physical impairment or combination of mental and physical impairments; are manifested before the person attains age 22; are likely to continue indefinitely; result in substantial functional limitation in 3 or more of the following areas of major life activity: self-care, receptive and expressive language, learning, mobility, self-direction, capacity for independent living and economic sufficiency; and reflect the person's need for a combination and sequence of special, interdisciplinary or generic care, treatment, or other services of a lifelong or extended duration and are individually planned and coordinated (Joint Commission on Accreditation of Hospitals, the Accreditation Council for Services to Mentally Retarded and Developmentally Disabled, 1986).

Ecological Assessment: A form of assessment in which emphasis is placed on the interaction between the individual and the environment.

Educational Retardation: Academic achievement, as measured by standardized tests, on one or more of the basic skill subjects that is markedly below that expected for chronological age level.

Family Grouping (also known as vertical grouping and multigrade teaching): System whereby primary school children of different chronological ages are taught, usually in groups, within the same class, often by the same teacher for all subjects. Groups may be self chosen or designated by the teacher, but are usually arranged to work cooperatively, so that older pupils accept some measure of responsibility for younger ones.

Follow-Along: The establishment and maintenance of a long-term relationship with the individual and family, as they desire, for the purpose of assuring that anticipated changes in needs and/or needs arising from crisis are recognized and appropriately met.

Group Teaching: System of teaching which for the whole or part of the school day enables pupils in primary school to work in groups, either by choice or by designation of the teacher. It often also implies pupils working cooperatively and taking responsibility for the learning of others, as well as for themselves.

Generic Service System: The full rang of services to all people in the areas of health, education, social services, rehabilitation, employment, legal services, housing and other services in a community.

Genotype: Genetic characteristics of individuals transferred in the parental genes at fertilization.

High Risk Infants: Those who have a high probability of disability as indicated by specified environmental or physical factors identified during the prenatal, perinatal, or early childhood period.

Independent Functioning: The ability of the individual to accomplish successfully those tasks or activities demanded of them by the general community, both in terms of the critical survival demands for the community and typical expectations for specific age groups.

Individualized Educational Program (IEP): A written plan developed for students receiving specialized instruction or services in school; contains the instructional goals and objectives for the students, the specialized instruction or services to be received by the student in a given period of time (usually annually), identified who will deliver the services, and the time frame within which they will be delivered.

Illiteracy: The inability to read and/or write well enough for practical use in the absence of impairment of intelligence or structural or physiological sensory defect; ordinarily attributed to failure to receive or take advantage of educational opportunities but sometimes attributed to low mental ability

Impairment, Disability and Handicap: The World Health Organization (1980) classification system respects the consequences of disease or impairment and distinguishes among the terms impairment, disability and handicap. An "impairment" may be a consequence of disease of injury. Impairment occurs at the level of an organ of the body including the brain. Examples of impairments include head injury, muscular weakness, vision or hearing deficits. A "disability" may or may not be a consequence of impairment. Disability refers to a function relevant to the performance of a normal social role, which has either remained undeveloped or has been lost. Unusually, disability is a consequence of an impairment and implies some deprivation which prevents the person from developing alternative ways of functioning. For example, an inability to read may result from a visual impairment. The individual is disabled because he or she cannot perform the societal role of school student. A "handicap" is the result of social factors outside the person which interact with an impairment or a disability.

Integrated Day: The organization of teaching so that the learning day is not broken down into periods. The child largely determines his/her own learning pace and goals according to a program agreed with the teacher.

Integration: A term which refers to (a) the education of children with special educational needs together with children without special educational needs (also called mainstreaming), (b) the use by persons with disabilities of the same schools and community resources that are used by and available to other citizens, (c) participation in the same educational and community programs and activities in which non-disabled children and adults participate, together with regular contact with non-disabled citizens, and (d) residence by persons with disabilities in homes or in home-like settings which are in proximity to community resources, together with regular contact with non-disabled citizens in their communities. (DD Act, 1983).

Interdisciplinary Team: A group of professionals who work together, meeting for the purpose of diagnosis, and for planning interventions for disabled persons. Such a group typically includes a physician, a psychologist, and a social worker, in addition to representatives of other disciplines that provide services to the individuals in a facility. This term sometimes refers simply to the collaboration of regular and special educators.

Intervisiting (also called partnership teaching): System of mutual peer review of teaching, where teachers sit in on and appraise each other's teaching with a view to improving their own professional practice.

Learning Disabled: A broad category of students who have the common problem of having difficulty in school learning especially in reading and/or math; some educators view learning disability as distinctly different from retardation and others do not.

Least Restrictive Environment: Choices that represent the least departure from normal patterns of living that can be effective in meeting the individual's needs (Joint Commission on Accreditation of Hospitals, 1984).

Mean: Arithmetic average; the sum of a set of scores (or values) divided by the number of scores (or values).

Median: The middle score in a distribution; the fiftieth percentile; the point that divides the group into two equal parts. Half of the group of scores falls below the median an half above it.

Mental Retardation/Learning Difficulties: Mental retardation or learning difficulties is defined as a developmental disability characterized by significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period (American Association on Mental Deficiency, 1984). Intellectual disability may or may not be a consequence of an organic impairment. Disability, a social concept, refers to functioning relevant to the performance of a normal social role which has either remained undeveloped or has been lost (World Health Organizations, 1980). Levels of learning difficulties are:

> **Mild Learning Difficulties:** A term used to describe the degree of difficulty present when intelligence test scores are 50 or 55 to approximately 70 ; many mildly retarded (educable) individuals who function at this level can usually master basic academic skills whereas adults at this level may maintain themselves independently or semi-independently in the community.
>
> **Moderate Learning Difficulties:** A term used to describe the degree of difficulty when intelligence test scores range from 35 or 40 to 50 or 55; such persons require continuing and close supervision but may perform self-help and simple work tasks under supervision; sometimes called dependent retardation.
>
> **Severe to Profound Learning Difficulties:** A term used to describe the degree of difficulty when intelligence test scores are below 20 or 25; such persons require continuing and close supervision, but some may be able to perform simple self-help tasks; profoundly retarded persons often have other handicaps and require total life-support systems for maintenance.

Mode: The score or value that occurs most frequently.

Multigrade Teaching (see also family grouping and vertical grouping): Group teaching approach simultaneously addressing the needs of two or more age cohorts of children within the same classroom, usually organized into chronologically homogeneous or heterogeneous cooperative groups.

Multisensory Learning: A technique to facilitate learning that employs a combination of sense modalities at the same time (such as sight, tactile and sound).

None-Presence Supervision of Teaching Practice: A technique derived from social work case approaches, where the college tutor does not actually see the student teacher in the classroom, but supervises his practice teaching through the discussion of protocols which the student prepares for discussion after each lesson.

Norms: Descriptive statistics for well-defined groups that are logical references for other individuals who take the test.

Nutritional Disorders: Dietary imbalances of the child can result in slow development and retardation. The imbalances arise from inadequate diet, idiosyncratic diets, metabolic disorders, parasitism, debilitating disease, excessive intake of vitamins, and various feeding problems (AAMD, 1983). Nutritional disorders include iron deficiency anemia and protein deficiency anemia.

Open Plan Teaching: System of primary school construction, where there are no walls between adjacent classes of children and the associated system of pedagogy, which encourages children to move freely from one space to another and use all available space for their activities and creative displays.

Outcome Measure: Measures of overall impact of an intervention or treatment on the target group.

Paradigm: An example or Model. (1) representation of a concept or system in a 2 or 3-dimensional diagram or a mathematical or other analogous form. (2) Means of transferring a relationship or process from its actual setting to one on which it can be more conveniently studied.

Percentile: A point (score) in a distribution below which falls the percent of cases indicated by the given percentile. Thus, a fifteenth percentile denotes the score or point below which 15 percent of the scores fall.

Peripatetic Teacher: (Also sometimes referred to as support, advisory or specialist teacher, although these terms are more correctly used with movement of the teacher within a school rather than among schools.) A specially trained teacher who travels from school to school to provide appropriate specialist advice and support to individual children, groups of children or to schools on a sessional basis.

Portage: An approach, first developed in Portage, Wisconsin, to provide home-based, preschool education for children with special educational needs, including impairments or developmental delay. The approach has been adopted in other countries, such as the United Kingdom, where there is a National Portage association.

Predictor: A measure used to forecast performance against some criterion. Examples include undergraduate grade point averages and verbal ability scores on college entrance examinations.

Preschool Education: A training program or nursery school education in which emphasis is placed on developing self-help, motor, communication, and social skills of young children. (See also Portage)

Prevention: Means (1) the process of the rearrangement of forces in the society against those negative factors in life of which disability is a consequence; (2) using screening and diagnostic procedures to identify high-risk children and provide interventions to prevent further disability.

Process Measure: Evaluation and monitoring activities to determine if services are reaching the target group and if the program is being implemented in conformity with specifications (Rossi, 1979).

Program Evaluation: A systematic set of data collection and analysis activities undertaken to determine the value of a program to aid management, program planning, staff training, and public accountability. Evaluation activities make responsible judgment possible about the efforts, adequacy, efficiency and comparative value of program options (National Institute of Mental Health, 1979).

Protein Deficiency: To be lacking or in want of protein; if severe protein-calorie undernutrition occurs in certain critical periods of mental development (probably in the late prenatal period and the first 6 months of life) it may be associated with mental retardation. Kwashiorkor is a clinical syndrome associated with retardation which results from a severe deficiency of protein with adequate to almost adequate caloric intake; occurs in children from 4 months to 5 years of age. Edema, diarrhea, dermatitis, depigmentation, and hepatomegaly are common manifestations.

Quality Input Measures: Evaluation of resources within the environment which are required to provide a service to recipients.

Quartile: One of three points (scores) that divide the cases in a distribution into four equal groups. The lower quartile, or twenty-fifth percentile, sets off the lowest fourth of the group; the middle quartile is the same as the fiftieth percentile, or median; and the third quartile, or seventy-fifth percentile, marks off the highest fourth.

Raw Score: A score obtained directly from the number of right and wrong answers and the number of questions omitted. A raw score may represent the number of right answers, the number of right answers minus a fraction of the number of wrong answers, or the number of right answers plus a fraction of the number of omitted items.

Rehabilitation/ Habilitation: The process of providing, in a coordinated manner, those comprehensive services deemed appropriate to the needs of a person with a disability, in a program designed to achieve objectives of improved heath, welfare, and the realization of ones' maximum physical, social, psychological, and vocational potential for useful and productive activity. Rehabilitation services are necessary when the disabled individual is in need of assistance and it is (a) beyond one's personal, social and economic adjustment; and (b) beyond the services available in one's daily experience. Such assistance continues as long as significant and observable improvement takes place. Habilitation is closely related to and is part, conceptually and programmatically, of rehabilitation. The range for functional goals is the same, as is the range of services which should be provided to attain the goals. The chief difference is the condition or nature of who is served. Habilitation refers to the process which involves individuals who need to acquire particular skills and/or functional abilities not possessed previously, such as independent living skills or vocational skills, while rehabilitation refers to the process which involves individuals who need to reacquire or maximize lost skills and/or functional abilities.

Reliability: The extent to which a test is consistent in measuring whatever it does or the degree to which repeated measurement of the same individual would tend to produce the same result.

Representative Sample: A sample that corresponds to or matches the population of which it is a sample with respect to characteristics important for the purposes under investigation.

Resource Room: A special classroom for teaching students for part of the school day, especially for those who have a mild handicap.

Resource Teacher: A special educator (or teacher-curriculum consultant) who provides instruction during part of the school day to students who spend much of the school day in the regular classroom; the resource teacher also consults with the student's regular classroom teacher and may act as adviser to other colleagues in his/her area of curriculum strength (See also support teacher).

SEN Coordinator: A member of a school staff (in a small primary school, the coordinator may be the headteacher) with specially designated responsibility for the coordination of SEN provision within the school, as well as acting as a resource or support person and trainer to other staff.

Serial Teaching Practice: A series of brief, but regular, visits to school, usually of no more than one day's duration during which student teachers, observe or practice teaching on an individual or group basis. One variant includes the teachers college staff member also teaching with the students in a team teaching situation.

Support Teacher: A specially trained teacher, who works in the regular classroom with the regular teaching, providing special support and assistance for individuals or groups of children having special educational needs. (This approach avoids the problems of withdrawal (pull-out) of pupils from the regular class.)

Special Class (Self-Contained Class): A class for students who have some disability and are given instruction by special educators who are trained for work in the area of disability. Students are usually grouped by age span of 2-3 years for a single class of no more than 12 students.

Special Education: A form of education involving modified or specially devised instruction for students who have difficultly learning in regular classrooms with the regular curriculum.

Specialist Teacher System: Deployment of teachers so that each teaches only his/her subject specialism to each class. Under this system the class may change rooms at the end of each period of instruction or the teacher or both.

Standard Deviation: A measure of the variability of a distribution about its mean (average). In a distribution of test scores, for example, a small standard deviation would indicate a tendency of scores to cluster about the mean; a large standard deviation would indicate a wide variation in scores. In a normal distribution, approximately 68 percent of the cases lie within the distance measured by one standard deviation on either side

of the mean, and approximately 95 percent of the cases within a distance measured by two standard deviations on either side of the mean.

Standard Error of Measurement: A number expressed in score units indicating the precision of test scores. The chances are about two out of three that an obtained score will be within a distance measured by one standard error of measurement (SEM) on either side of the true score and about 95 out of 100 that it will be within a distance measured by two SEMs on either side of the true score.

Study Practice: An approach to serial teaching practice, where one tutor and several students regularly spend a period of time in the same school or class to practice techniques of cooperative and team teaching. Each school-based session is usually followed by a debriefing session in college.

Team Teaching (Or Cooperative Teaching): There are two major meanings: a) Method of organizing teaching in which large numbers of pupils in larger and smaller groupings are taught by teams of teachers, in contrast with more traditional one-teacher-per-class approaches; a strategy for integrating children with special educational needs into mainstream classrooms, also referred to as co-teaching or support teaching.

Technical Assistance: In education, the term is used for the provision to developing countries by developed countries and international agencies of consultants and experts, such as teachers, lecturers, teacher-training staff, educational administrators, support staff and volunteers for the preparation of project, their implementation or evaluation, for the improvement of educational practice and the transfer of know-how. It may include education and training materials, equipment, and expertise for training and research.

Teacher Attrition: The total number of teachers leaving the stock of teachers during a given period of time. It includes those who leave to retire or who die or who leave to take up alternative employment. It is usually calculated in the form of a percentage of the stock of teachers, linked to the staff/student ratio to calculate the number of teachers needed to staff the schools in any given period.

Teacher Wastage: Statistic used to describe the number of teachers leaving the profession for alternative employment, sometimes used to gauge the attractiveness of teaching in comparison with other employment opportunities.

Teaching Practice: Period spent by a student teacher in a school classroom in order to practice teaching skills under the supervision of experienced teachers and/or teachers college staff.

Universal Primary Education: System of primary education offering schooling to all primary-age children, regardless of race, color, creed, sex, or ability.

Validation measures: Procedures, criteria or processes used in program evaluation which relate to the efficacy and effectiveness of implementation activities.

Validity: The extent to which a test measures what it is supposed to measure. There are different kinds of validity depending on the type of test and its purposes, and different kinds of evidence are appropriate for appraising different kinds of validity.

Value Clarification: The process that focuses on an individual's or group's mode of reaching decisions and the special import they place on actions and goals. The approach concentrates on the process so that the individual or group becomes aware of the value and its relationship to other values (Simon, Howe, and Kirschenbaum, 1972).

Vertical Grouping (see also family grouping and multigrade teaching): Primary school organizational system, where children of more than one age cohort are located within the same classroom and usually work in cooperative groups, which may be either chronologically homogeneous or heterogeneous.

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